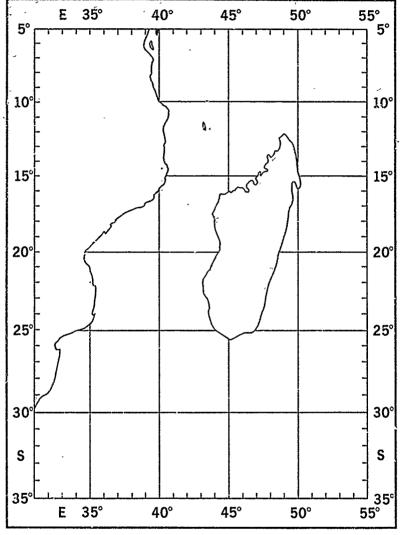
U.S. NAVY REGIONAL CLIMATIC STUDY OF THE MOZAMBIQUE CHANNEL AND ADJACENT WATERS

JULY, 1989

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PREPARED BY NAVAL OCEANOGRAPHY COMMAND DETACHMENT, ASHEVILLE, N.C.

PREPARED UNDER THE AUTHORITY OF COMMANDER, NAVAL OCEANOGRAPHY COMMAND

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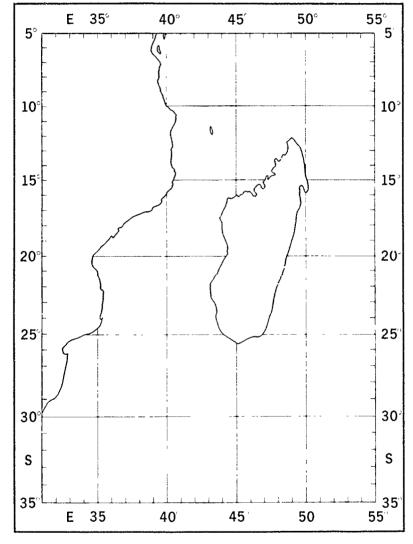
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TABLE OF CONTENTS

Introduction	1	.iv - xii
References		.xiii
Element Ind	dex	.1
Monthly Ele	ements (charts and tables)	.2 - 313
Station Clin	natic Summaries	.314 - 328
	FIGURES	
FIGURE 1.	Study Area Locator Map	
	and Bathymetry Chart	.v
FIGURE 2.	Surface currents	
	(Summer and Winter)	.vi
FIGURE 3.	Topographic Chart	.vii
FIGURE 4.	Mean Sea Level Pressure	
	(January and July)	.viii
FIGURE 5.	Monthly Means of Temperature	
	and Precipitation	.ix
FIGURE 6.	Average Number of Tropical	
	Cyclones per 5° Square	
	per Year	ж.
FIGURE 7.	Annual 12 Hourly Movements of	
	Tropical Cyclone Centers with	
	Tropical Storm Intensity	
	or Greater	vi



U.S. Navy Regional Climatic Study of the Mozambique Channel and Adjacent Waters

The U.S. Navy Regional Climatic Study of the Mozambique Channel and Adjacent Waters was prepared by the Officer in Charge, Naval Oceanography Command Detachment, Asheville, North Carolina, under authority of Commander, Naval Oceanography Command. The work was performed at the National Climatic Data Center (NCDC). Specific acknowledgement of "" NCDC staff is made to Mr. J.D. Elms, project leader; Mr. P.M. Steurer, for his data analysis; Messrs C.N. Williams, Jr., R.G. Baldwin and Ms. P.L. Franks for data processing and digital graphics; Mr. M.J. Changery for technical review; and Messrs M.G. Burgin and S.J. Miller for their drafting skills.

Geographical and Data Coverage

This study, entitled the <u>U.S. Navy Regional Climatic Study of the Mozambique Channel and Adjacent Waters</u>, is centered on the Mozambique Channel between Mozambique in southeast Africa and the island of Madagascar. The study limits extend from 5°S to 35°S and 31°E to 55°E, thus allowing a small overlap between this study and the one for the Southern African Waters, (NAVAIR 50-1C-548). Most emphasis was placed on the marine areas, with only a few coastal station summaries included in the text and final section of this publication.

Figure 1 outlines the study area and shows the location of the land station summaries and bathymetry information.

Surface marine observation statistics are presented on monthly charts in the form of graphs, tables and isopleth maps. Land station data appear graphically and in Station Climatic Summary tables. The marine data (mostly from ships of opportunity) were summarized and machine plotted by one-degree quadrangle. The graphs and tables for the marine areas are also presented by one-degree quadrangles (for visibility, wave heights, wind roses and ocean currents). The geographical area for the tables, ocean currents, and wind roses had to be divided and presented on four pages for clarity. These graphs and tables represent the objective compilation of available ship data; the data were not adjusted for suspected bias (low observation count, heavy weighting of observations during a short time interval, biases in coding, etc.), and differences may be found when comparing the graphical data with isopleth analyses. The total number of observations for a given one-degree square should always be considered when interpreting the data, as there may be an insufficient number to permit representative statistics.

Approximately 825,000 surface marine observations were used in computing the statistics. These data were collected by ships of various registry traveling in the area. Many of the ships' observations are presently transmitted over the Global Telecommunications System, captured and archived. However, many are digitized from ship log forms by various participating members of the World Meteorological Organization, and exchanged under international agreement among the various maritime nations of the world. Data for this study date back to 1854 and run through 1984. The bulk of the observations are from the last 30 years, which is significant because more recent observations contain more elements than pre-1948 reports. The density of observations is greatest along the major shipping routes which, in this study area, includes one passing through the Mozambique Channel, where most traffic tends to hug the African coast, and a second that passes near the southeastern corner of Madagascar and extends onto the southern tip of Africa.

The mean sea current charts were obtained from available ship's "set and drift" measurements that had been forwarded to the Naval Oceanographic Office from ships of various registry. The data were summarized to give the primary and secondary current directions and mean speeds.

Physical Features

The study area lies in the southern hemisphere bordering the southeast coast of Africa along Tanzania, Mozambique and South Africa and extending east into the Indian Ocean just east of Madagascar. Besides including the world's fourth largest island (Madagascar), a number of smaller islands are found off the coast of Tanzania and at the northern end of the Mozambique Channel. At its narrowest point, the Mozambique

Channel spans 210 nautical miles between Mozambique and Madagascar. Based on weather reports most of the ship traffic seems to prefer navigating closer to the African coast than the center of the channel or the Madagascan coast. This is probably due to the amount of oil tanker traffic out of the Persian Gulf enroute to the Americas and Europe, the lack of major west coast Madagascan ports, hazardous waters off Madagascar, and most importantly, the well-defined current along the western side of the channel.

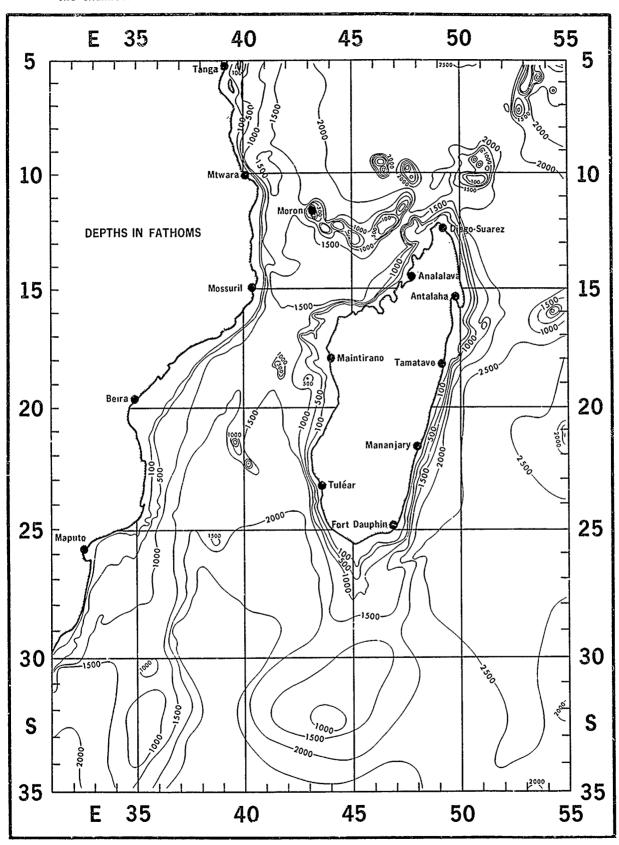
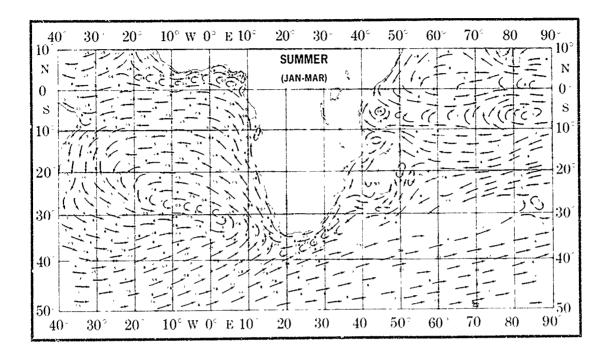


Figure 1. Study area locator map and bathymetry chart

The equatorial ocean current's flow is drastically affected by the island of Madagascar as it causes the current to split its flow around the island to the north (the Equatorial Current) and south (the South Equatorial Current). The warm and fairly strong and consistent Mozambique Current flows south through the channel throughout the year. It does, however, demonstrate somewhat greater strength during the northern monsoon. Figure 2 shows the general ocean currents of the region during the summer and winter seasons. The constancy of the Mozambique Current is depicted along with the countercurrent established in the eastern corridor of the channel with speed and direction much less consistent due to varying flow around the ends of the island and by numerous local conditions.



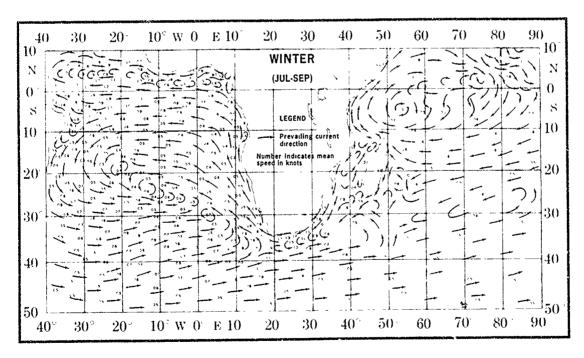


Figure 2. Surface Currents (Summer and Winter)

Central highlands extend the length of Madagascar. The highest peak is Mt. Tsaratanana, on the northern end of the island at 9436 feet. These central highlands rise gradually from the relatively wide west coast plain but drop rather abruptly from the plateau to the narrow coastal plain on the east.

In Tanzania, highlands are found in both the northern and southern sections of the country while the central area is basically a dry plateau. The coastal plains with elevations of 1500 feet or less are rather extensive in the central and southern regions where the beaches are sandy and highly developed coral reefs are found. Rufiji, the largest river in Tanzania drains the southern highlands and most of the remaining southern region. However, it is a minor river when compared to any of the three great rivers of Africa, the Nile, Congo or Zambezi. It does, however, have good potential for irrigation and hydroelectric power.

Mozambique, which extends the full length of the Mozambique Channel, consists nearly half as lowlands, 10 percent mountains along its western boundary, and the remainder as plateau. The country is essentially divided in half (north and south) by the Zambezi River which originates in Angola and provides access to the interior of Africa from the east. Although there are more than 25 other rivers within the country that drain into the Indian Ocean, none are navigable. Because of the variability in rainfall, especially in the southern regions, river flow is highly variable with the region occasionally experiencing severe droughts and floods. Mozambique's coastal region is also known for its sandy beaches much as those of Tanzania to the north.

Farther south ne finds a narrow coastal belt along the east coast of South Africa with a vast piateau region inland. Numerous rivers flow from the edge of the plateau into the Indian Ocean but unlike the majority of the rivers in Mozambique, these have little potential for either irrigation or power generation.

Reference Figure 3 for an overview of the general topography across the entire study area.

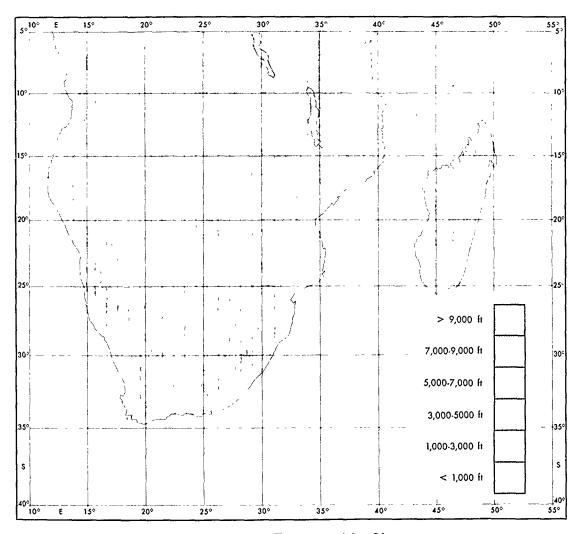
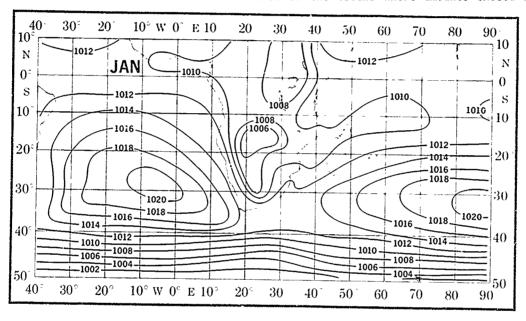


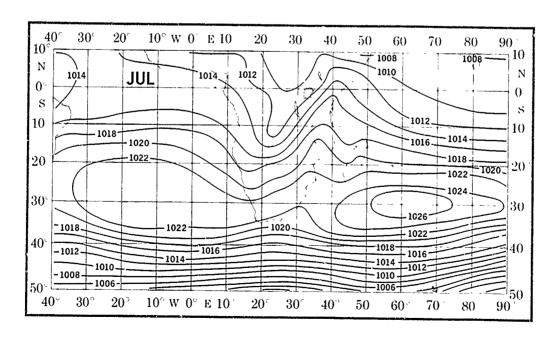
Figure 3. Topographic Chart

<u>Climate</u>

The climate of the study area is greatly influenced by the placement of the semi-permanent southern hemisphere subtropical highs to the east and west of Africa (see Figure 4) and the large north-south annual displacement of the Intertropical Convergence Zone (ITCZ). Summer brings the greatest precipitation as the ITCZ lies over central Mozambique and northern Madagascar creating instability showers and thunderstorms. The rainy season (October-April) is known as the northern monsoon while the dry season (May-September) as the southern monsoon. These labels naturally come from the prevailing air flow during these periods. Rainfall amounts decrease significantly across the entire region during the dry season with decreases as much as 80 to 95 percent across eastern Africa, and central and western Madagascar. Along the narrow coastal strip of eastern Madagascar, the decrease in rainfall between the two monsoon seasons is less pronounced than in other areas because of the influence of the easterly trade winds, which help sustain monthly averages of 3 to 8 inches during the dry season.

In general, annual precipitation values average from less than 15 inches in central Tanzania and portions of southern Mozambique to over 60 inches in the higher elevations of both countries. Least rainfall within the study area is observed in the semi-arid southwest corner of Madagascar where annual amounts average under 12 inches. This is in contrast with the northeast coast of the island where amounts exceed 100





inches per year. The portion of the east coast of South Africa, within the Mozambique Channel study area, averages 30 to 40 inches of precipitation a year, the most for any region in South Africa.

Geographical location (relatively low latitudes) and the warm Mozambique Current help keep the annual temperature variations near sea level small. Much greater variability is naturally observed at the higher elevations. Summer temperatures average in the low 80's (°F) with daily maximum temperatures averaging in the low 90's (°F) and daily minimum temperatures in the mid-70's (°F). A greater temperature range is noted during the winter when a well defined north-south temperature gradient is established. Mean wintertime temperatures range from the high 60's (°F) in the south to the upper 70's (°F) in the north. Daily minimum temperature average in the low 50's (°F) to the high 60's (°F) with daily maximum temperatures generally averaging in the low 80's (°F).

Figure 5 presents the monthly means of air temperature and precipitation for a number of stations within the study area giving a pictorial of the discussion in the previous three paragraphs.

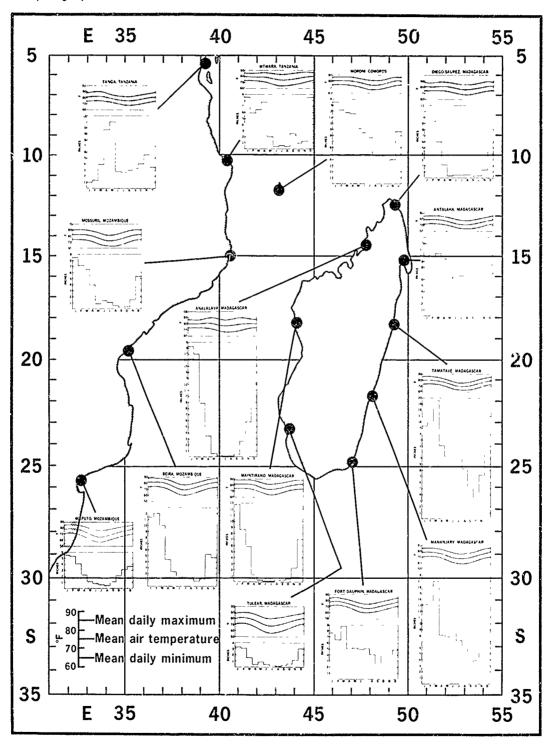


Figure 5. Monthly means of air temperature and precipitation

The main tropical cyclone season for the southwest Indian Ocean basin is December through March with significant occurrences in April, October and November (Crutcher and Quayle, 1974). While most tropical cyclones remain east of Madagascar, some do track across the Mozambique Channel and east Africa. On average (Figure 6) just over one storm per 5 degree square per year is observed in the Mozambique Channel while east of Madagascar frequencies reach nearly 2.5 storms per year. Figure 7 shows the historical 12 hourly movement statistics by 5 degree square of tropical cyclones with wind speeds estimated to be 34 knots or greater. Tropical cyclones usually form to the northeast of Madagascar between 8° and 10° south. The most violent storms that eventually make landfall often strike the northeast corner of Madagascar, although no location on the island is safe from their potential devastation. Crossing the island usually weakens the storms significantly but on occasion they will regenerate upon reaching the sea.

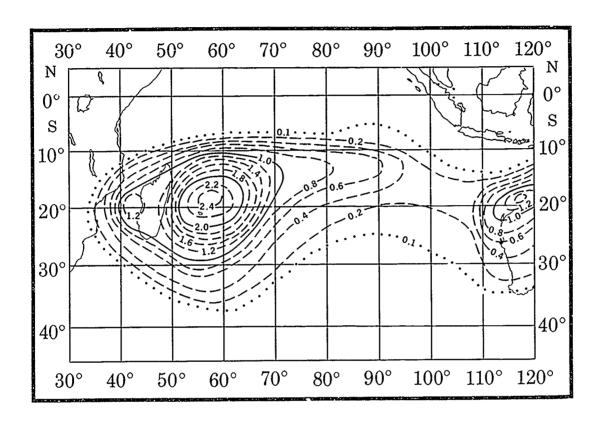


Figure 6. Average number of tropical cyclones per 5° square per year

Marine Climatological Elements

Precipitation

Of the elements recorded in the marino data base, precipitation is the one most subject to error in both the way it is observed and the way it is interpreted. For example, it is often inferred in the literature that ships often try to avoid foul weather and thereby bias the data towards fair weather with fewer precipitation observations. Elms (1986) compared the Volunteer Observing Ship (VOS) observations to other sources of data such as Ocean Station Vessel (OSV) and buoys, finding little evidence that "fair weather bias" is a serious problem for most applications of marine climatic data. With the introduction in 1982 of a present weather indicator $\binom{1}{1}x$) to the international Ship Synoptic Code FM13-VII, users have to be careful not to bias the data, especially that from between January 1982 and March 1985 when the indicator was inadvertently left out of the international data exchange format.

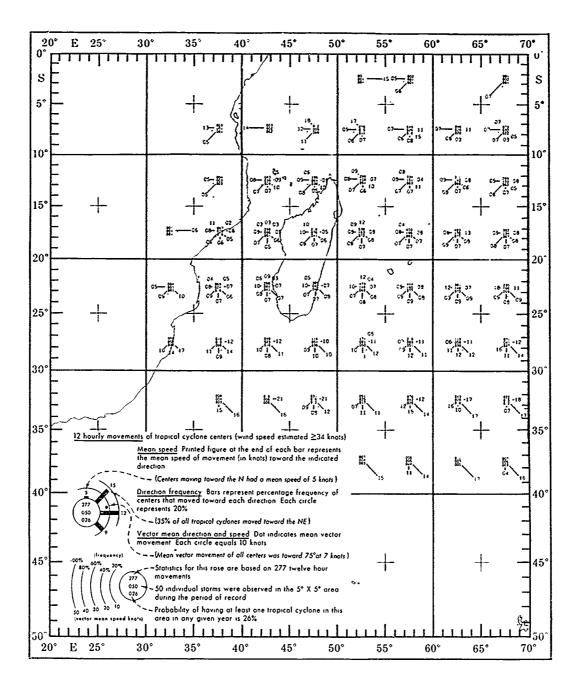


Figure 7. Annual 12 hourly movements of tropical cyclone centers with tropical storm intensity or greater

In comparing the frequencies given on the precipitation charts in this volume to those in the <u>U.S. Navy Marine Climatic Atlas of the World, Volume III, Indian Ocean</u> (Revised 1976), one will generally see a smaller percentage of present weather observations reporting precipitation. The major reason for this is that in the earlier publication the weather codes 20-27 (precipitation in the past hour) were counted in the precipitation frequencies in order to help correct an apparent observation bias. For this regional climatic study it was decided to present the data as reported. The higher frequencies (20-27 code included) certainly seem to agree better with those for land stations and OSV sites for most regions of the globe. The 1982 code change may also affect the frequencies. A more in-depth study is needed to help decide which method best represents the climate. At this point, however, it is possible only to bring the issue to the attention of the data users. Even without the coding problems, assessing oceanic rainfall data is a major problem because transit ships are unable to take quantitative precipitation measurements. A number of studies have been conducted in efforts to predict precipitation amounts, or rates of fall, based on estimates derived from the use of present weather observations from ships of opportunity (Goroch, et al., 1984) and readings from satellites (Rao, et al., 1976).

Air Temperature

Air temperature is one of the elements most frequently observed by mariners. It should be noted that on many ships the heating effect of the ship's structure has a tendency to produce higher than actual ambient air temperature readings because of instrument exposure (folland et al., 1984; Wright, 1986). This is especially true under calm, sunny conditions. Therefore, some ship temperature observations have a varm bias; however, the aggregate is relatively representative after erroneous outliers have been eliminated and the numerous nighttime observations and unbiased daytime observations are included. Also, true extremes are rarely captured since continuous observations are not made at most ocean locations. It is highly unlikely that a ship-of-opportunity would be taking its synoptic weather observation at the exact time that an extreme was occurring.

Sea-Surface Temperature

Sea-surface temperatures are recorded with a fairly high frequency in marine observations. The principle methods for sampling are with ship water-intake thermometers and by reading the temperature of sea water retrieved with the buckets. Even though the two methods can produce slightly different results (Barnett, 1984), the data can be used with considerable confidence when examining the long-term means.

Surface Winds

Surface wind is one of the most commonly observed elements. Many of the observations from the NCDC data base are visual observations based on the roughness of the sea. In recent years, more ships acquired anemometers and reported measured winds. Prior to 1963, many observed wind speeds were recorded in the Beaufort scale; such estimates have proven to be quite reliable and can be used with a high degree of confidence. Five sets of wind speed isopleths are presented: the scalar mean speed and the percent of frequency of winds less than 11 knots, from 11 to 21 knots, from 22 to 33 knots, and greater than or equal to 34 knots. Also given are wind roses for one-degree squares.

Visibility

Visibilities are difficult to measure at sea because of the lack of distance reference points. Climatically, many low visibility observations are probably missed because the observer is too busy with other duties (a contrasting form of fair weather bias). However, the coarseness of visibility (code) intervals helps to minimize the problem, thereby permitting the summarized data to be relatively consistent.

<u>Clouds</u>

A survey of the cloud data (total and low cloud amount) from the surface marine observation data base shows that the number of total cloud reports are significantly greater than that of low cloud amounts. This is because many of the early marine observations contain only total cloud amount. For the two presentations (total cloud amount $\leq 2/8$, and low cloud amount $\geq 5/8$), only those observations reporting both total and low cloud amounts were summarized. This helps eliminate problems introduced as a result of different size data sets (N-count). The use of satellite data helps to bolster confidence in the total cloud analyses because they show fairly close agreement with those analyses (U.S. Department of Commerce and United States Air Force, 1971).

Ceiling and Visibility

Aircraft-type ceilings are not available from marine observations. The ceilings are estimated from the height of the lowest cloud when low clouds cover more than half the sky. When the sky is totally obscured by rain, fog, dust, or other phenomena, the total obscuration is considered a ceiling with a height of zero. Mid-range ceiling and visibility charts (ceiling less than 1000 feet and/or visibility less than 5 nautical miles; ceiling less than 8000 feet and/or visibility less than 10 nautical miles) and low-range ceiling and visibility charts (ceilings less than 300 feet and/or visibility less than 1 nautical mile; ceiling less than 600 feet and/or visibility less than 2 nautical miles) are presented.

Wave-Heights

Wave-heights have been recorded in a consistent quantitative code since the late

1940's. The reluctance of many observers to take wave observations in the earlier years and the difficulty in estimating waves, especially in confused seas, make wave observations one of the least commonly observed elements. The observations are also subject to biases. Generally, the heights are too low, the periods too short, and the sea-swell discrimination poor (Quayle, 1980). The data in this study have not been adjusted for the suspected biases, but were processed through a quality control procedure wherein an internal check was made between wind speed and sea height. The data were also matrix-arrayed and apparent erroneous outlier data values were deleted from both the sea and swell data. Wave-height presentations include isopleth maps showing percent frequencies of wave-heights ≥ 3 feet and ≥ 8 feet. In addition, wave-height tables by one-degree square show frequencies by six wave-height categories. In these presentations, the higher of the sea or swell was selected for summarization. If heights were equal, the wave with the longer period was selected.

Ocean Currents

The ocean current charts were compiled from ship drift reports that were forwarded by the various merchant marines to the U.S. Naval Oceanographic Office. From those drift observations, the prevailing and secondary current directions, mean current speed, percent of total observations used to compute the primary and secondary directions, and the total observation count are presented by one-degree square. This information is presented on monthly charts with the study area being divided into four sections (pages) to ensure readability. The density of the observations is greatest along the major shipping routes and the reliability of the current charts is best in those areas. The data are considered most useful when used collectively, such as in summaries where a large number of observations are available.

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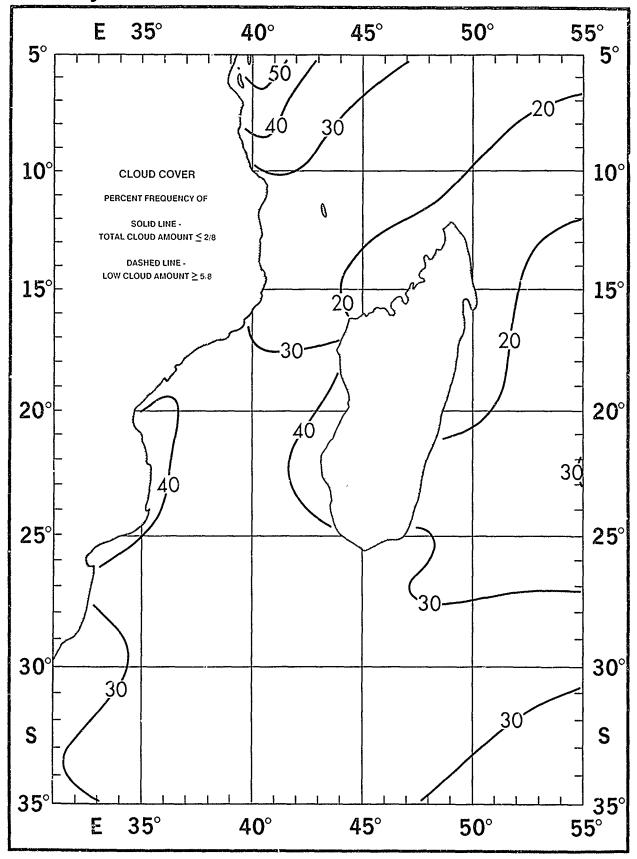
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PAGE INDEX

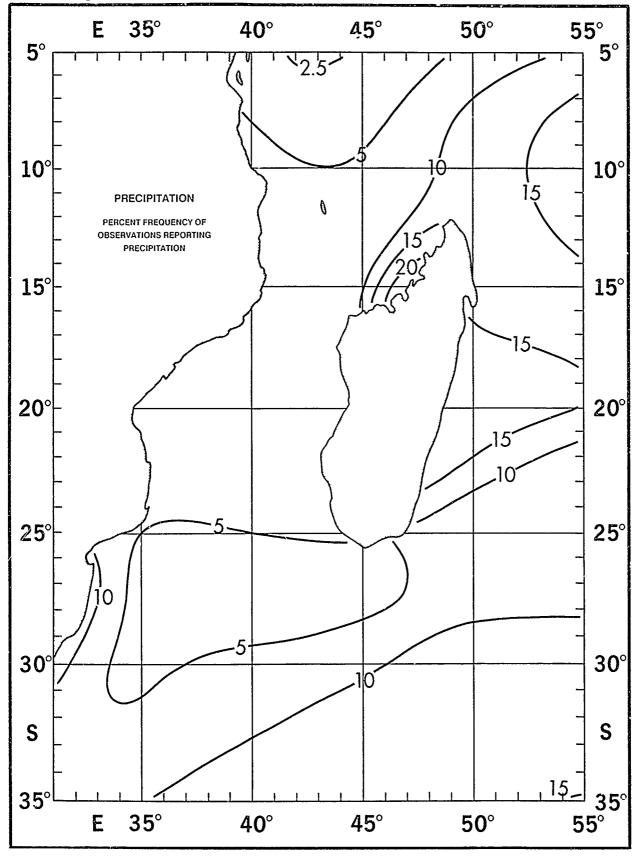
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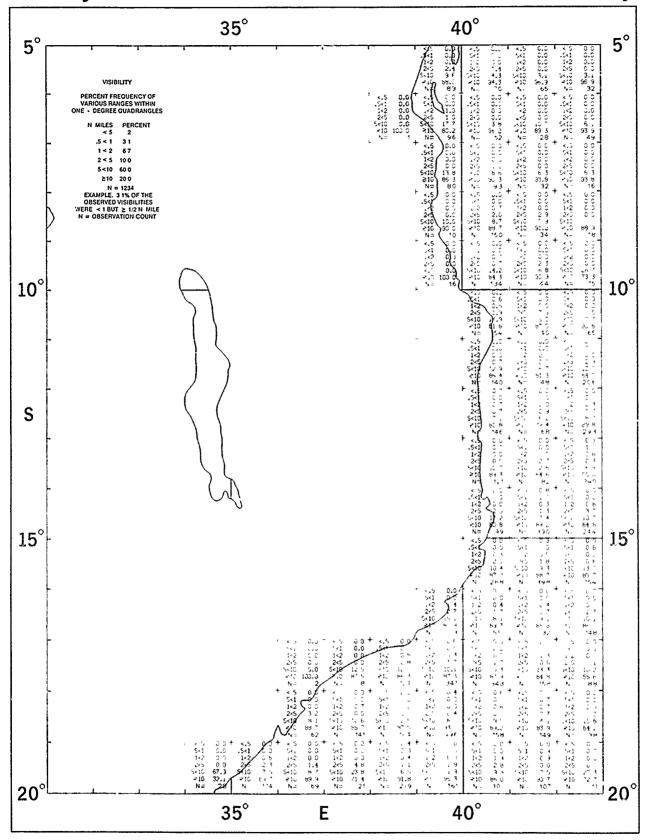
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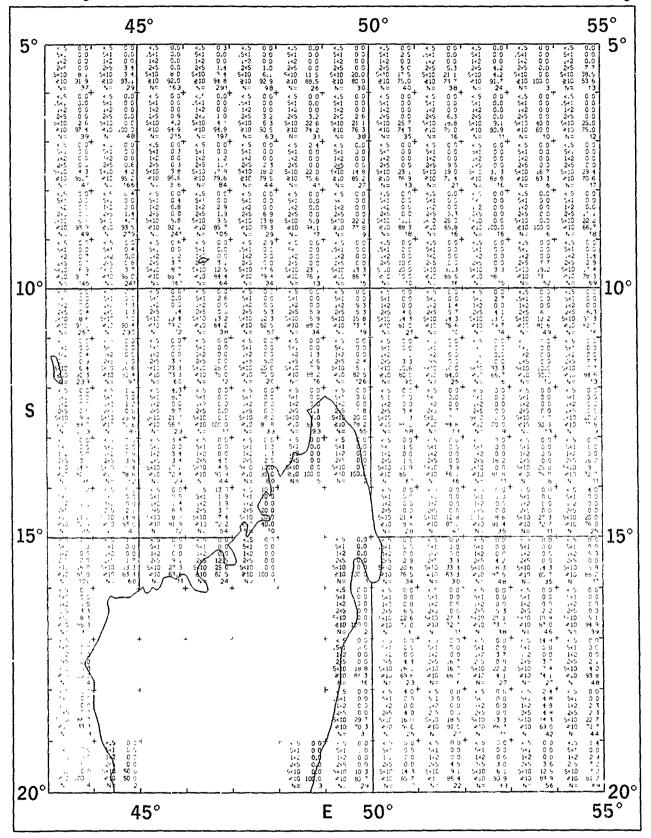


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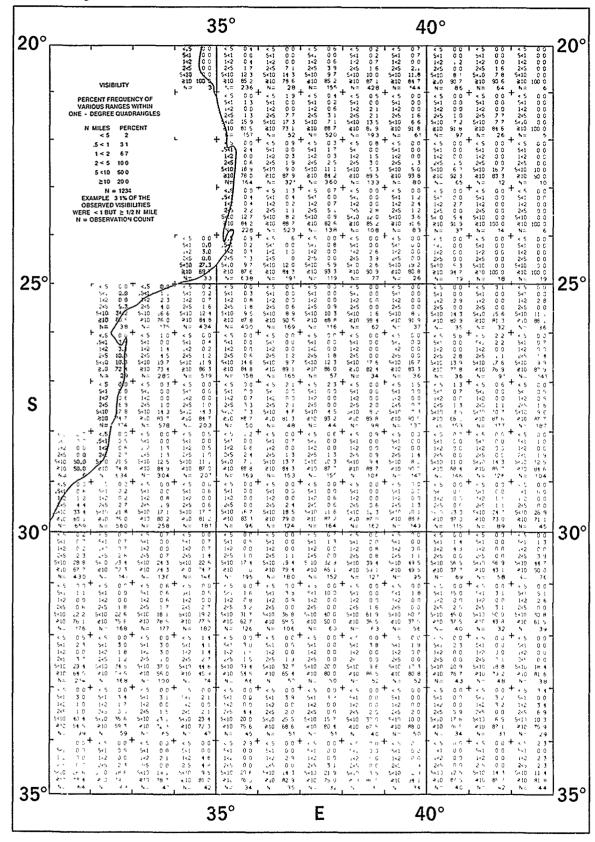




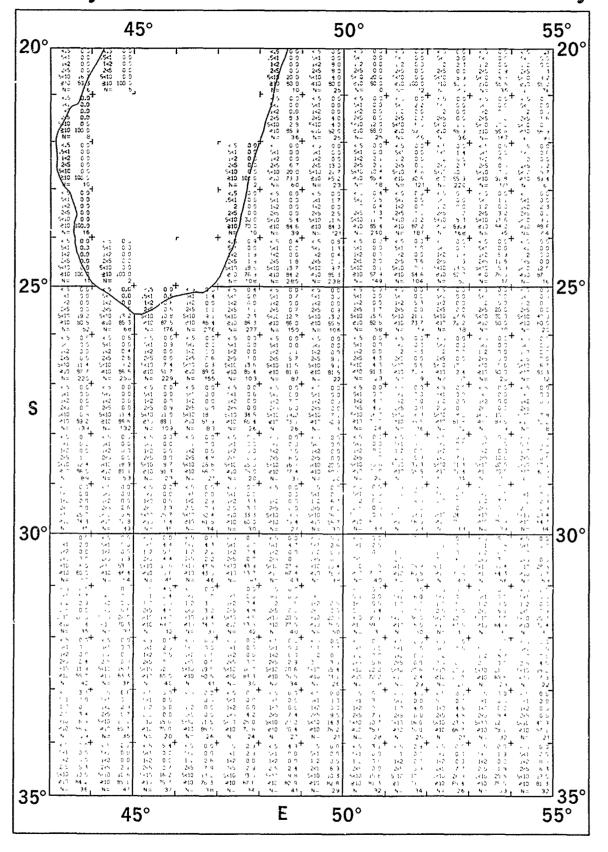
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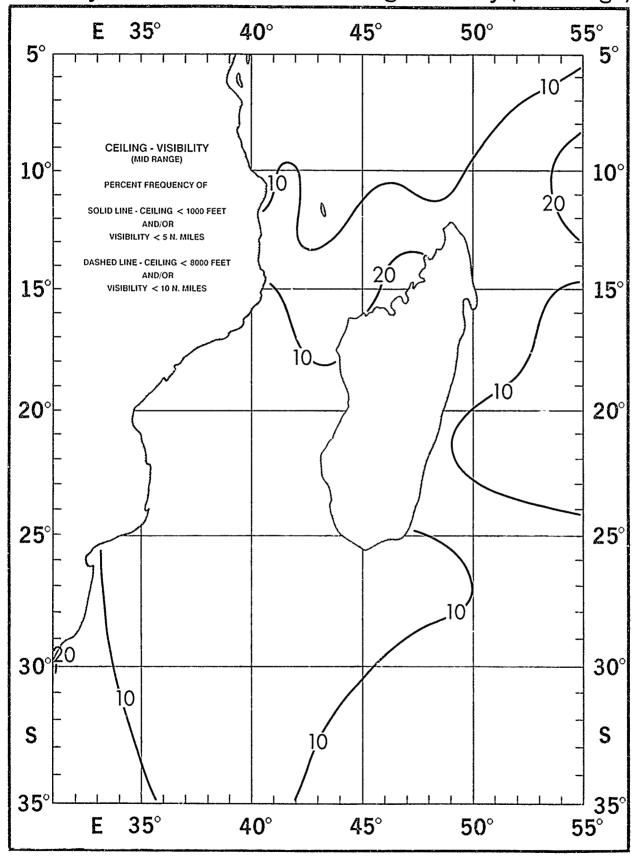


Visibility



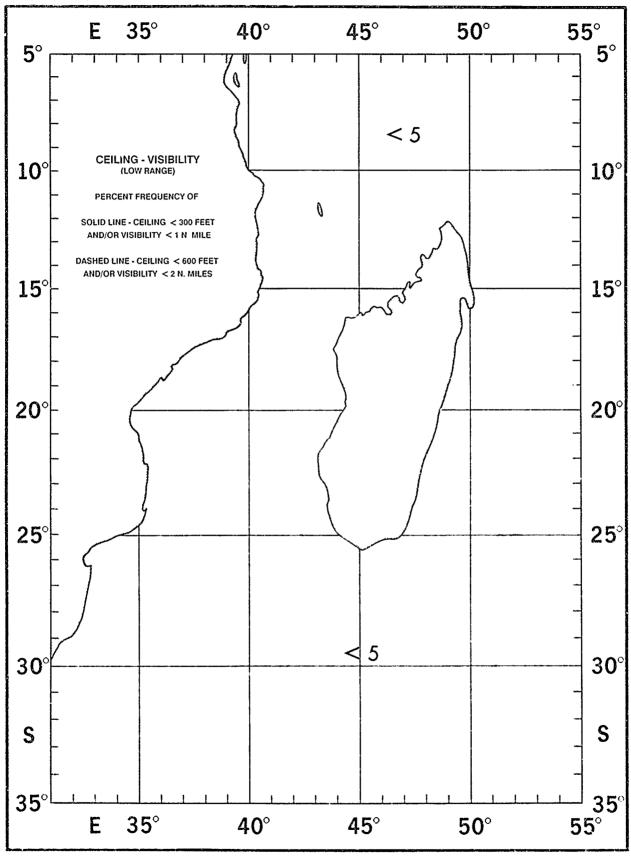


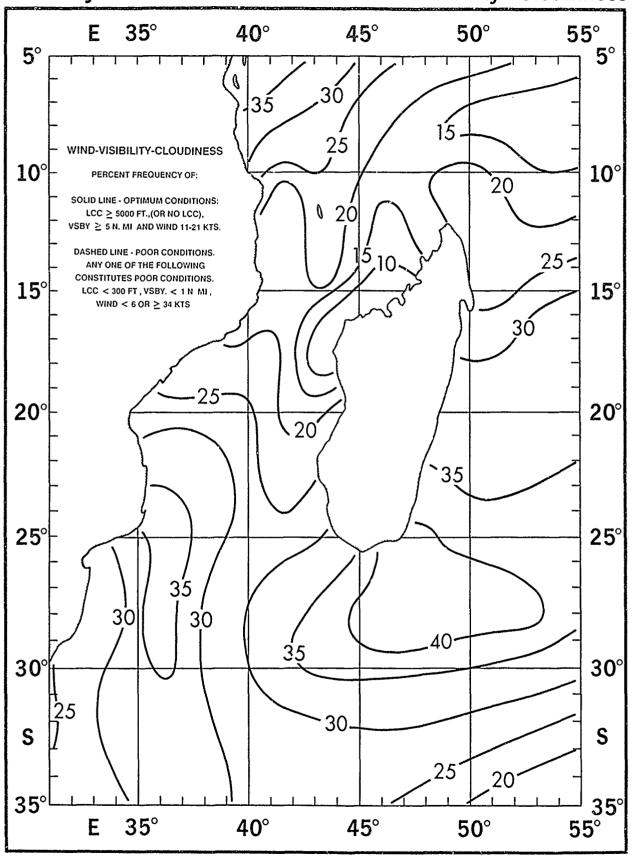
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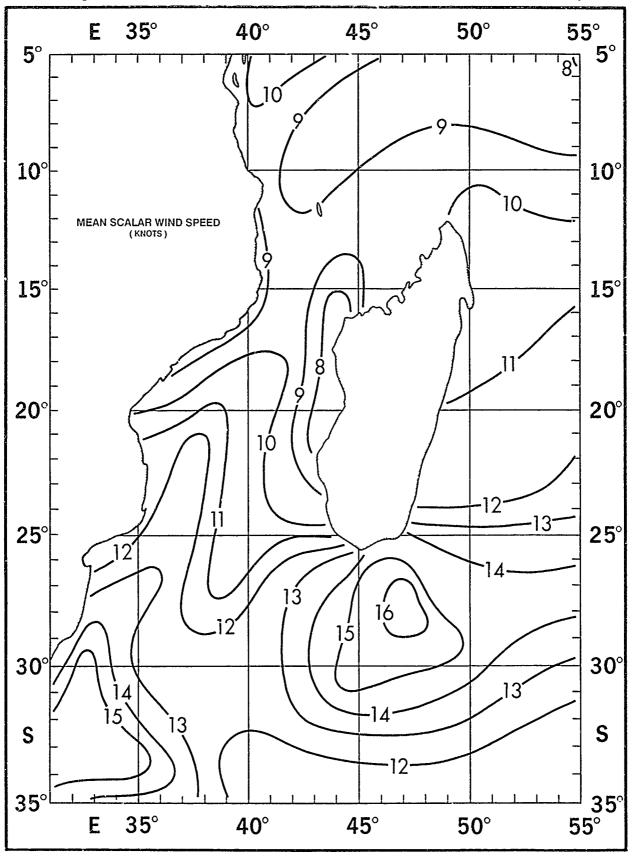




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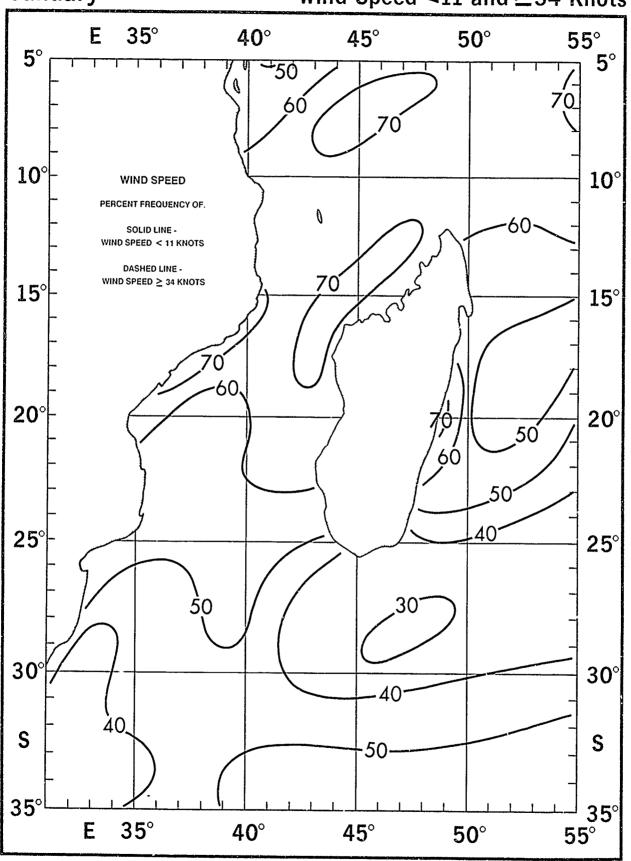




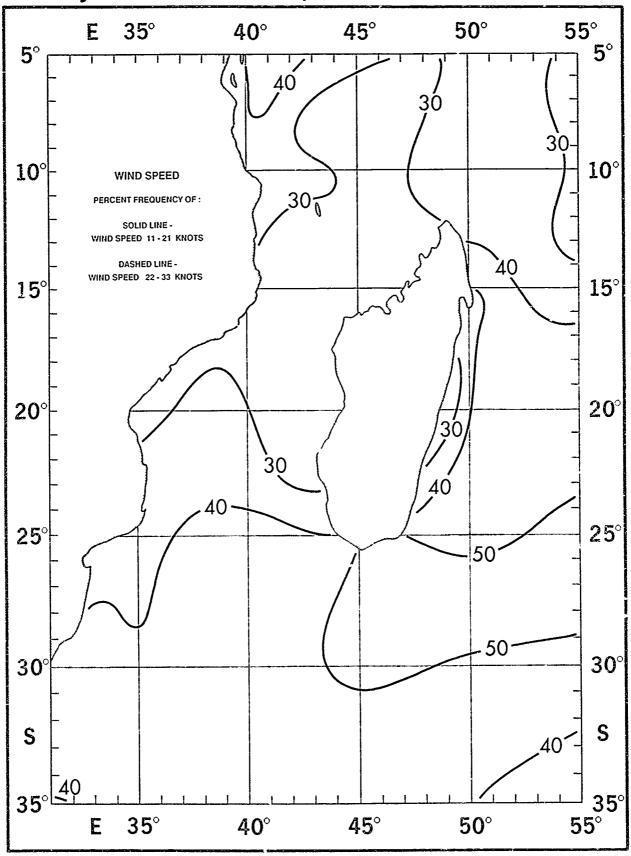


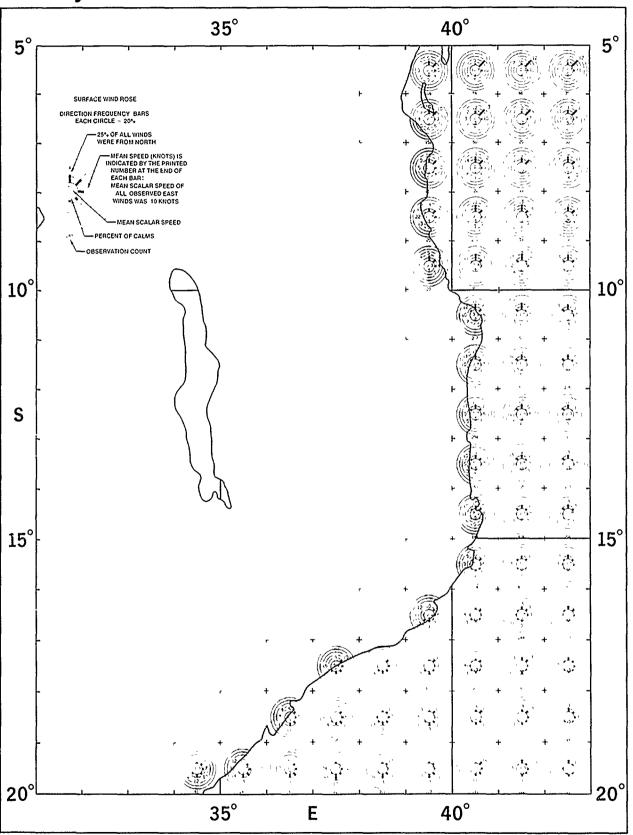


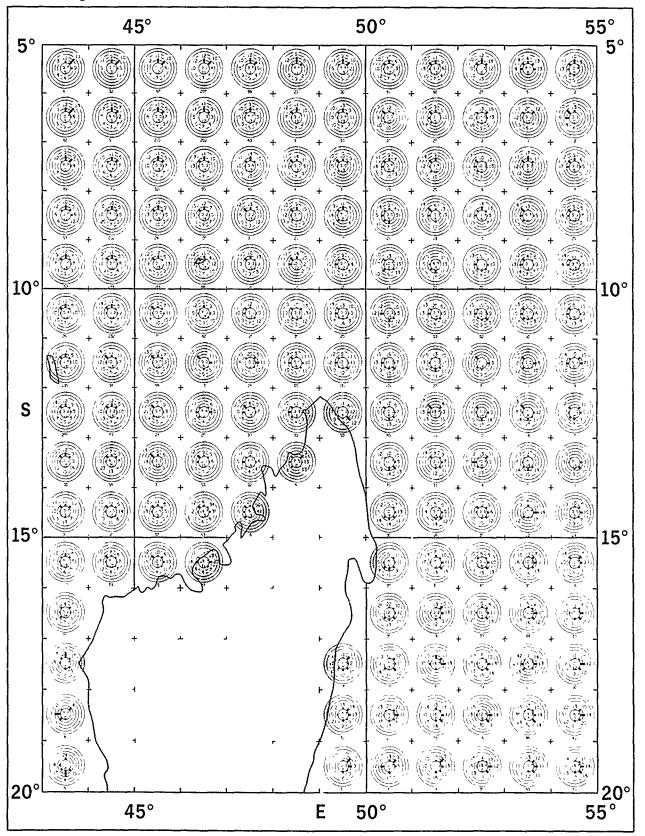
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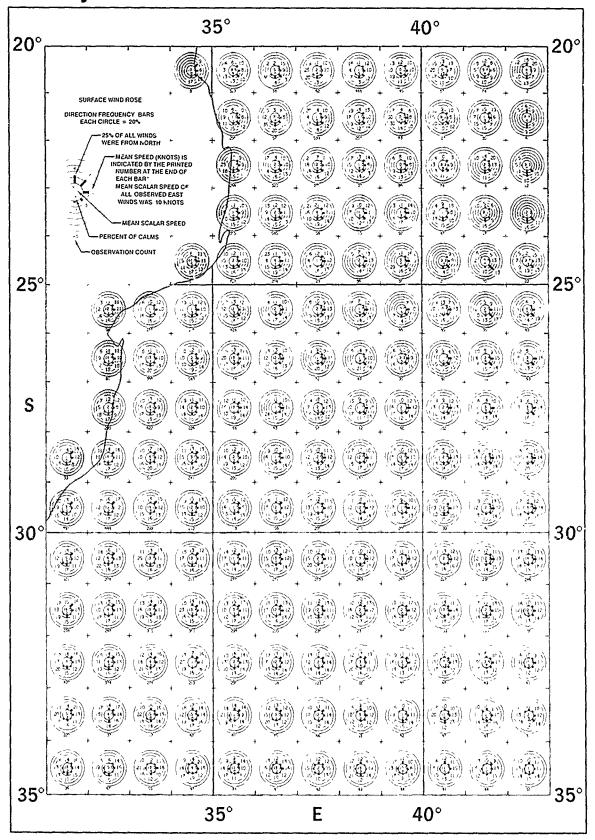


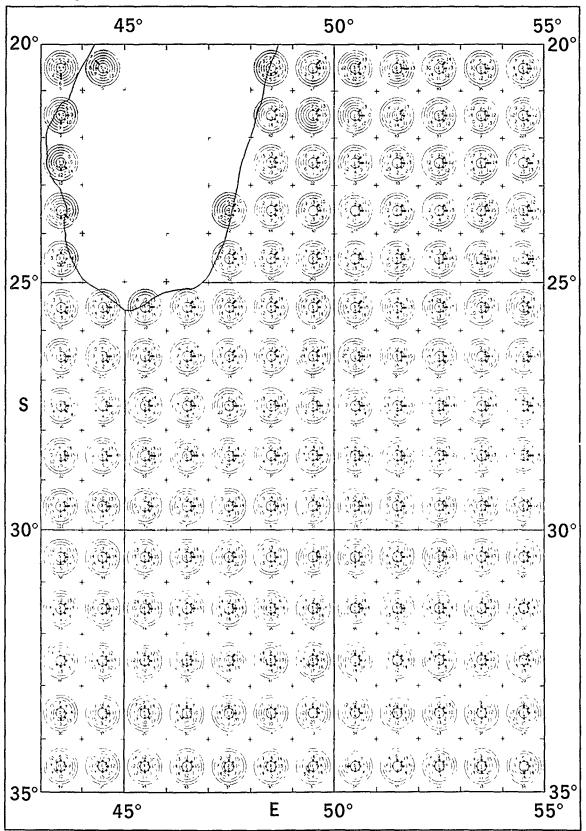
Wind Speed 11 - 21 and 22 - 33 Knots

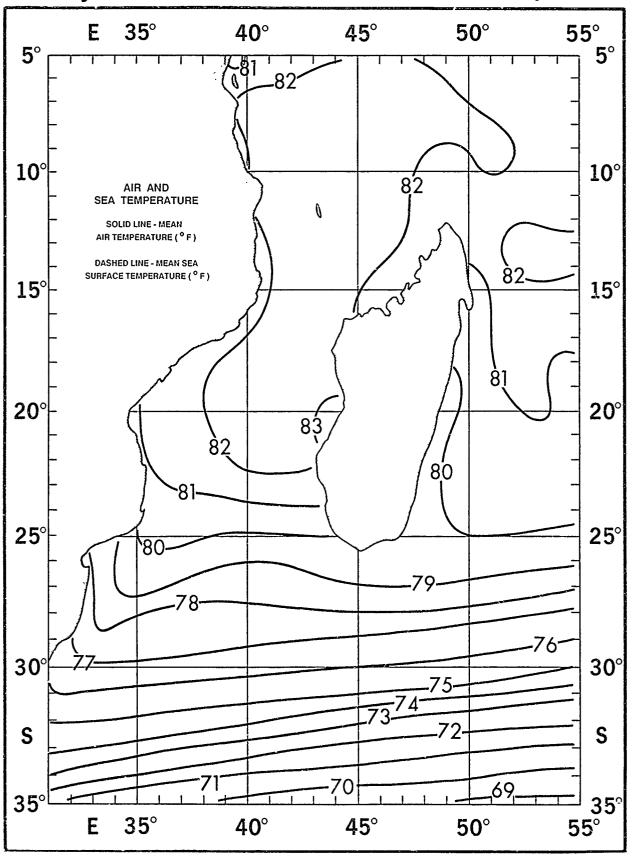


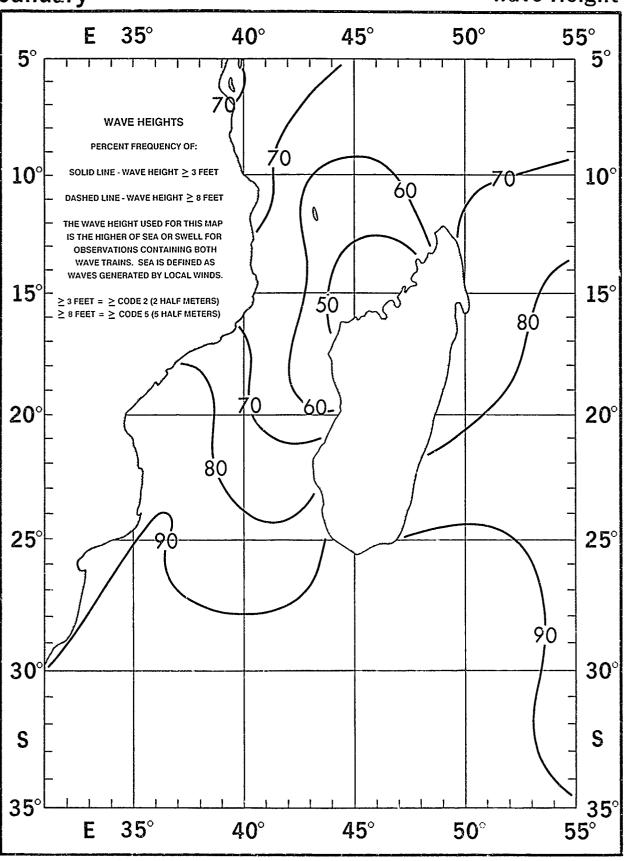


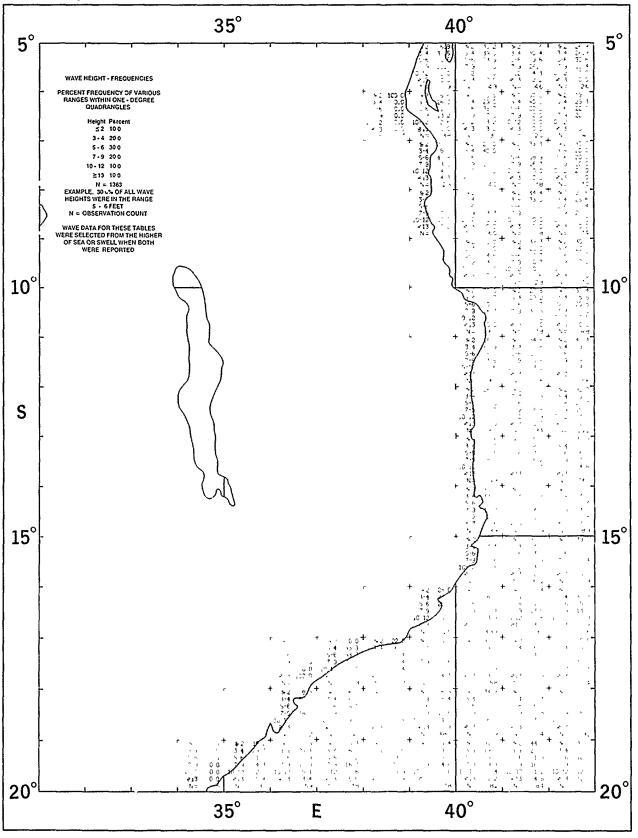


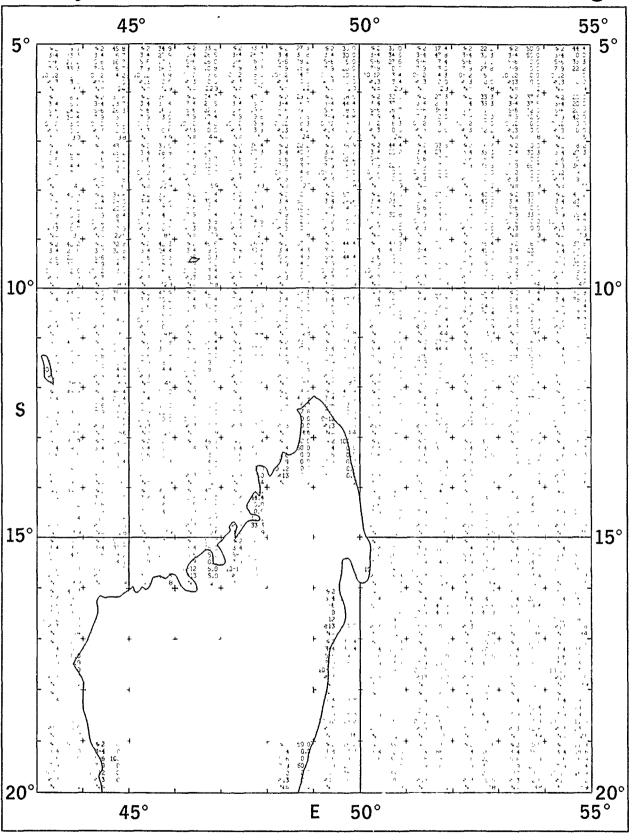


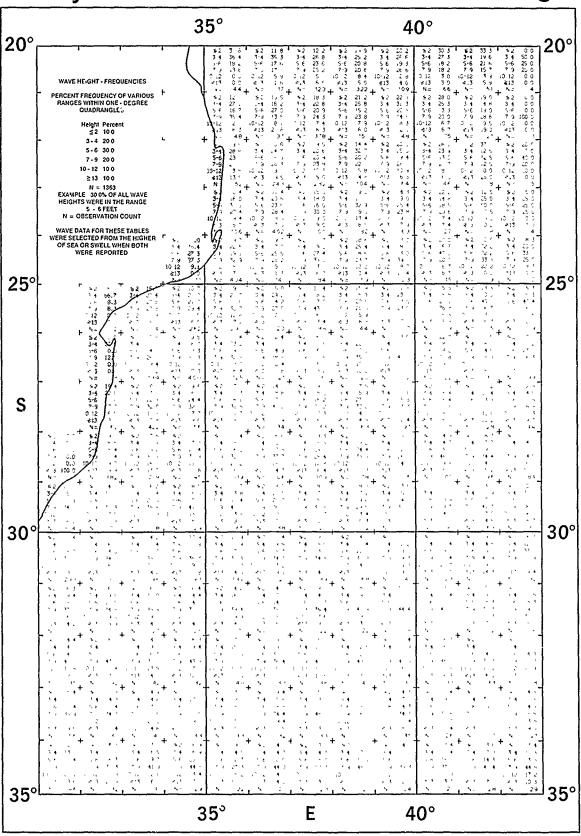


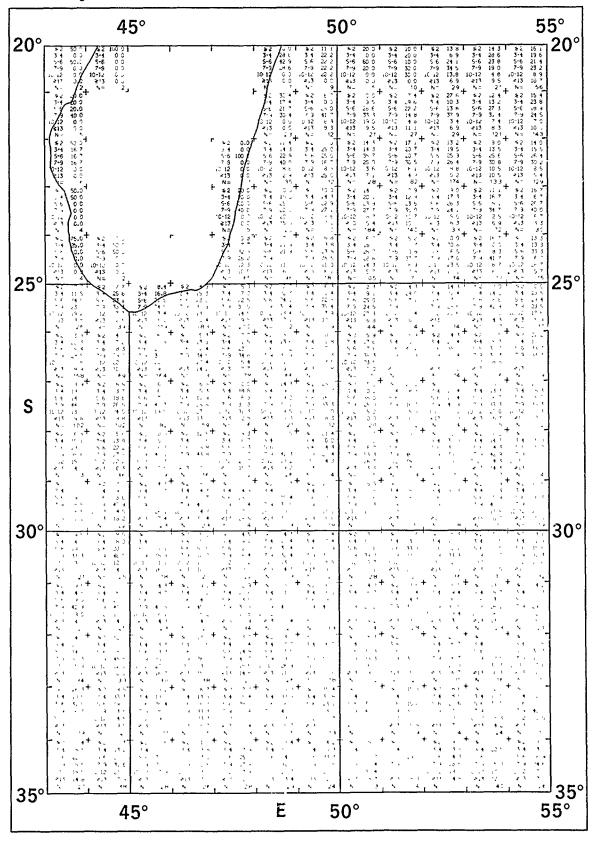


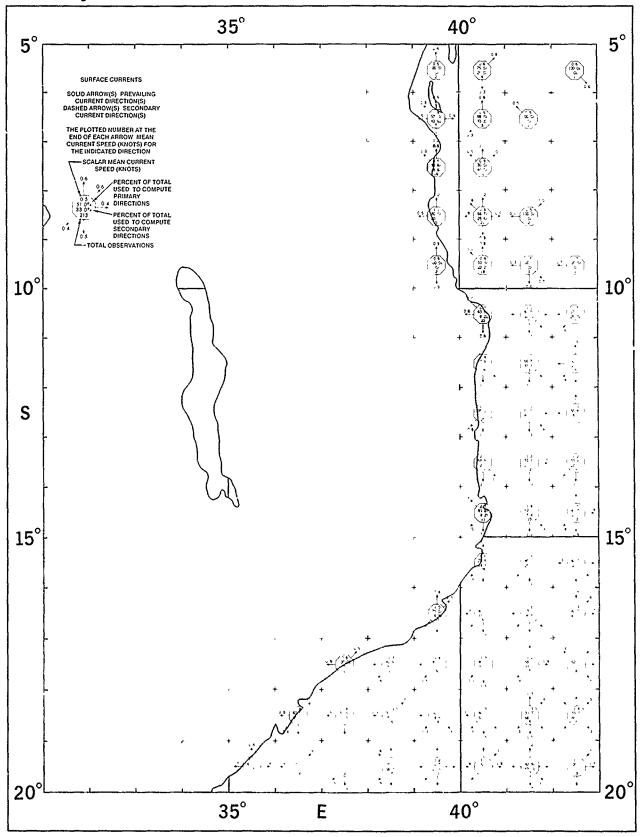




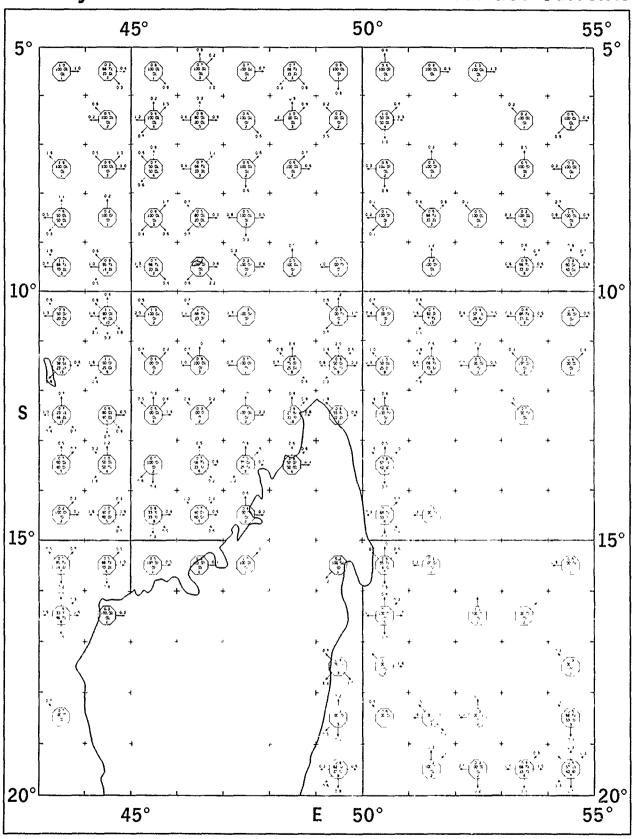




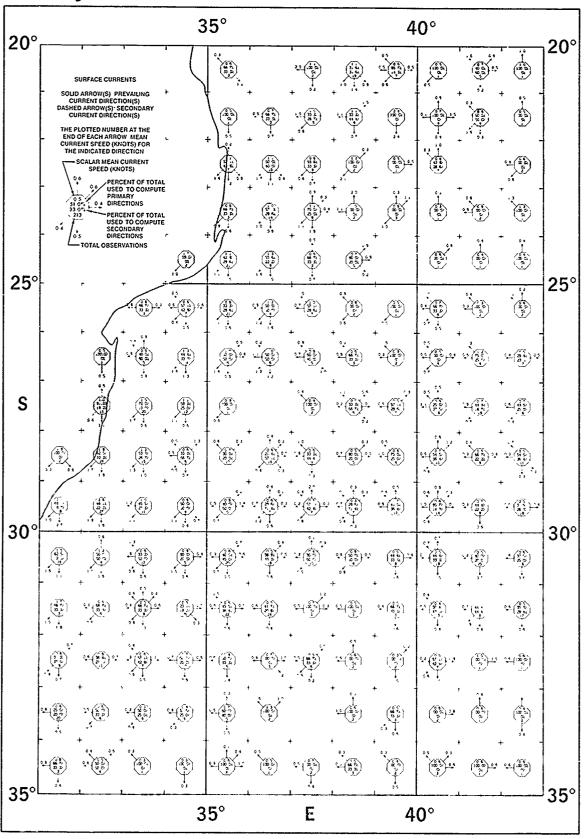




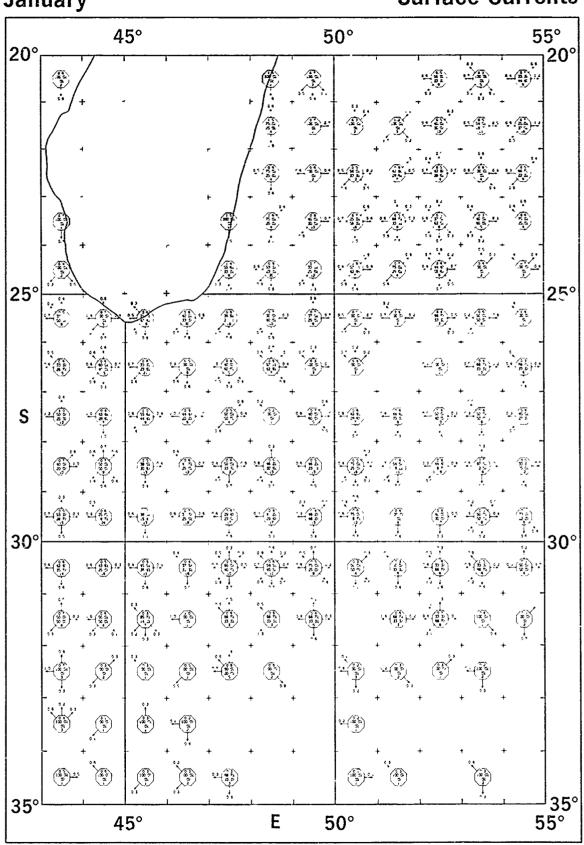
January



January

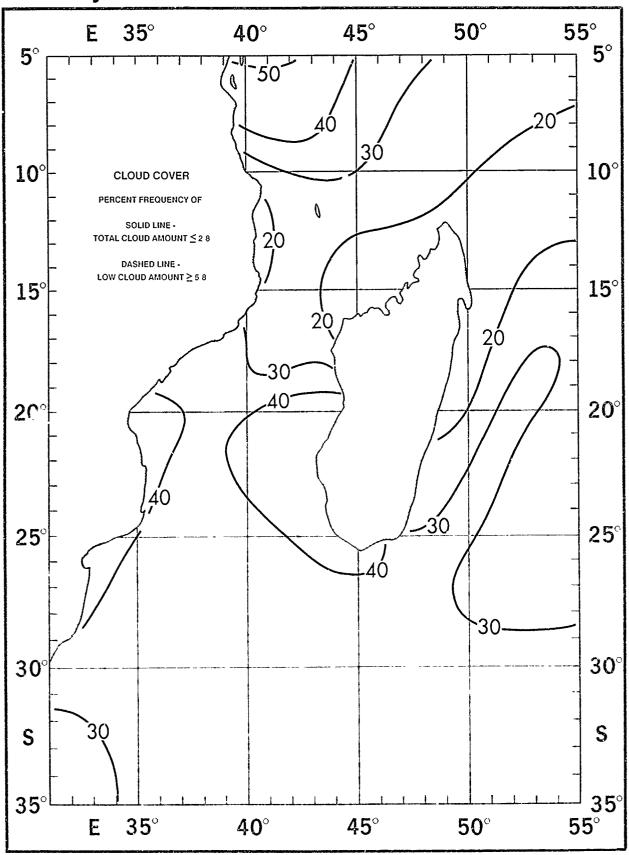


January



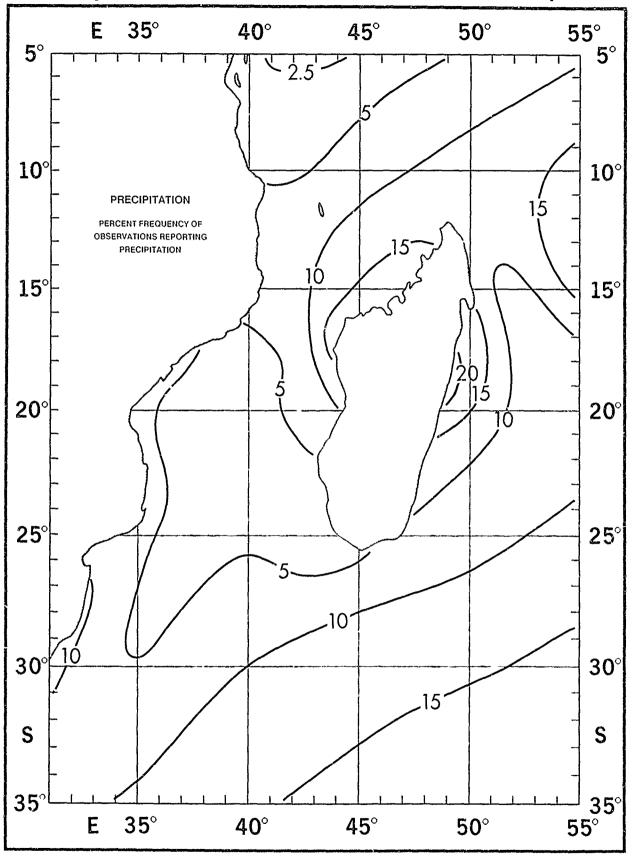


Clouds

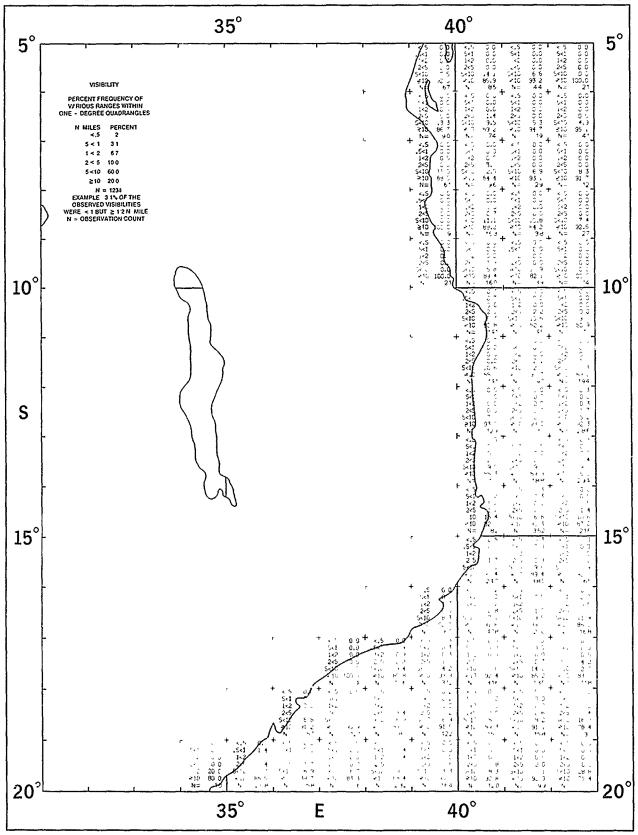


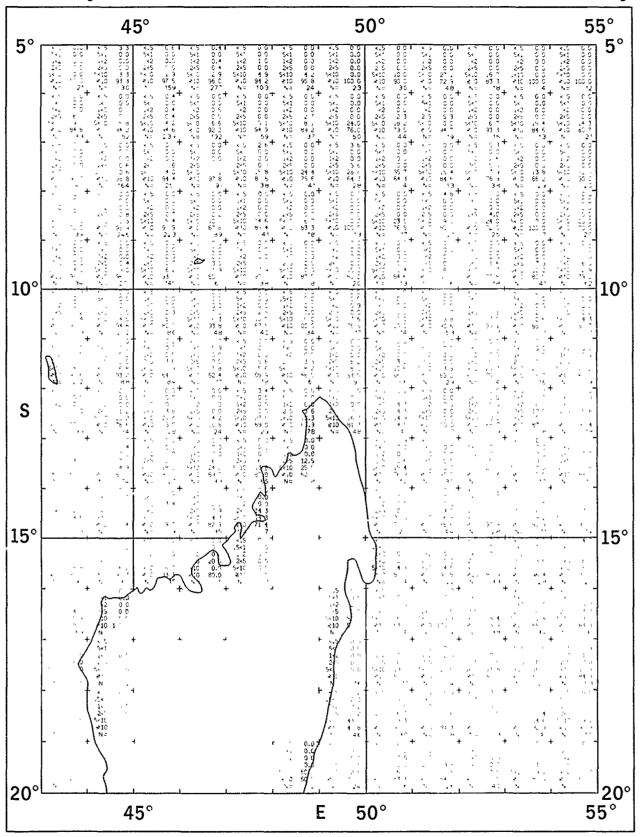


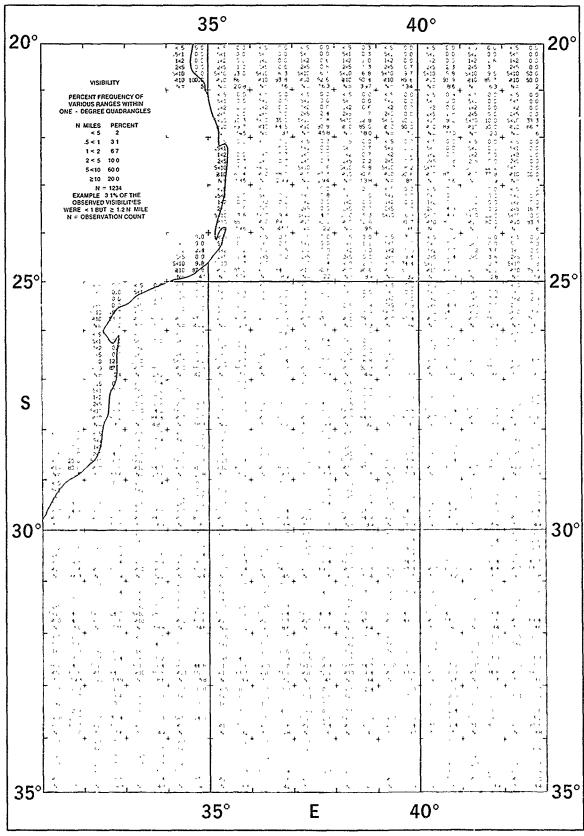
Precipitation

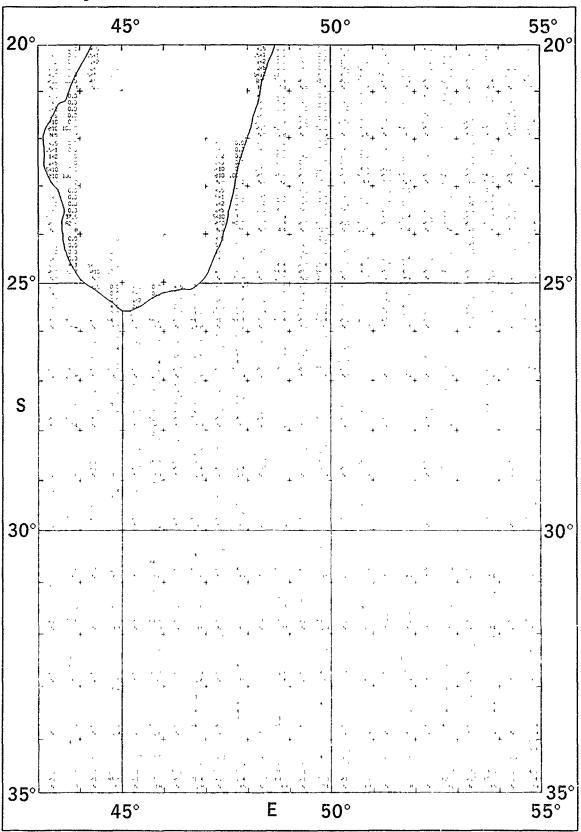


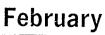




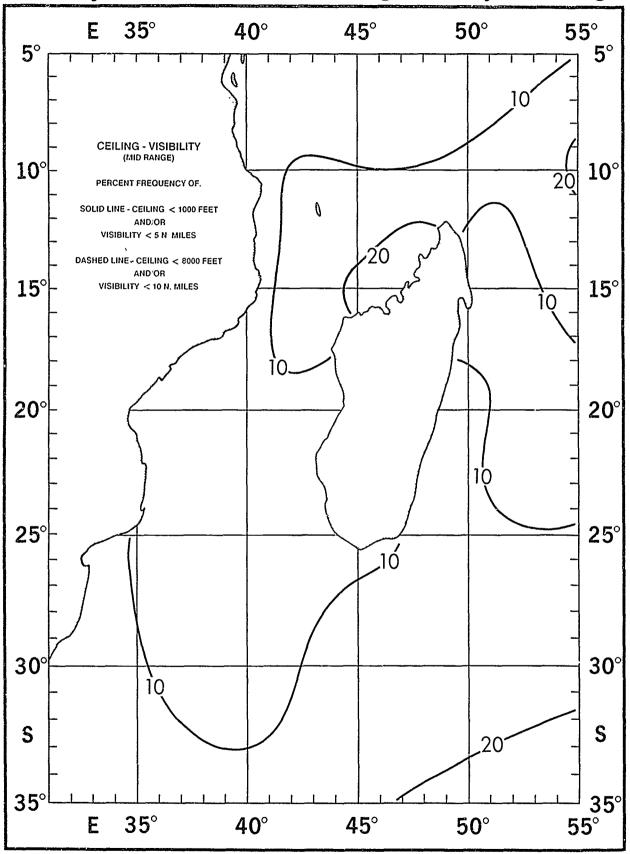


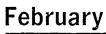




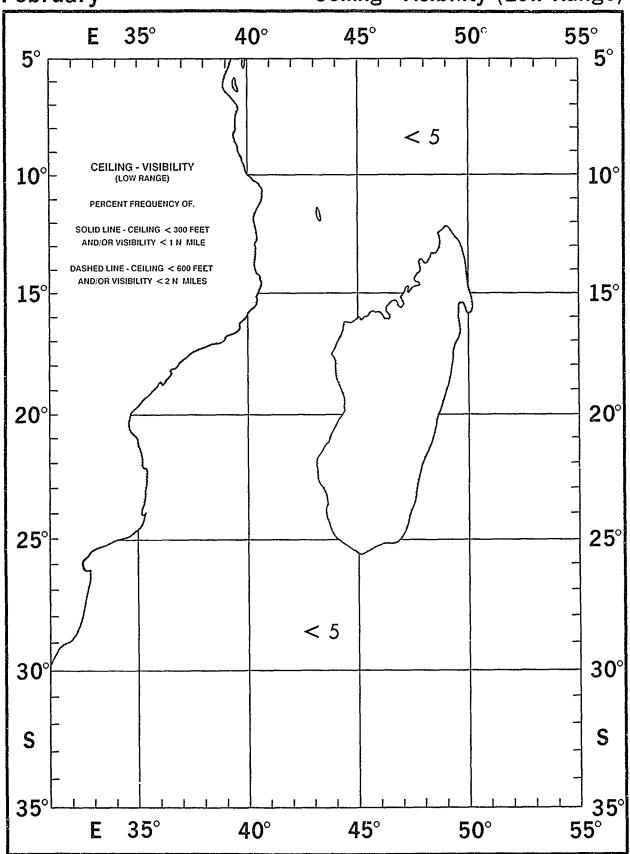


Ceiling - Visibility (Mid Range)



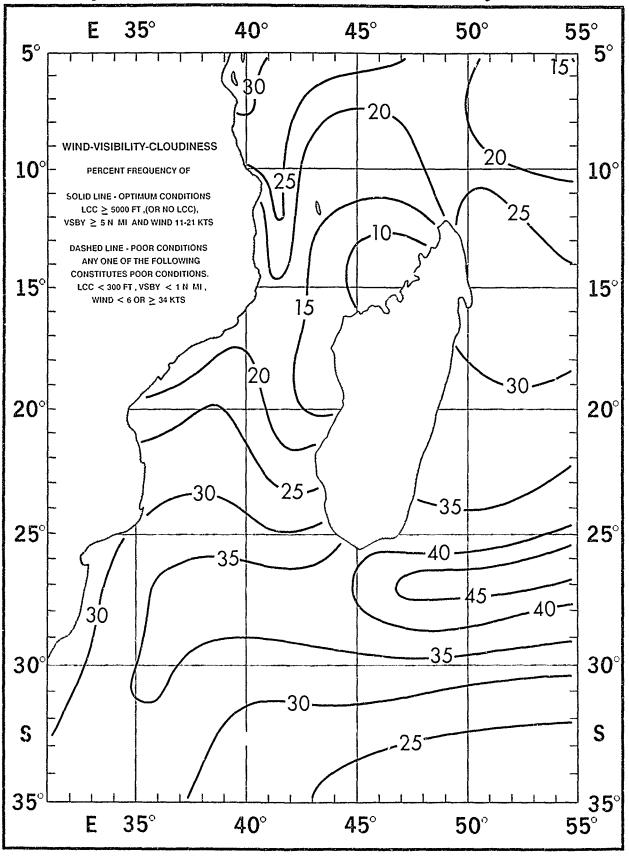


Ceiling - Visibility (Low Range)



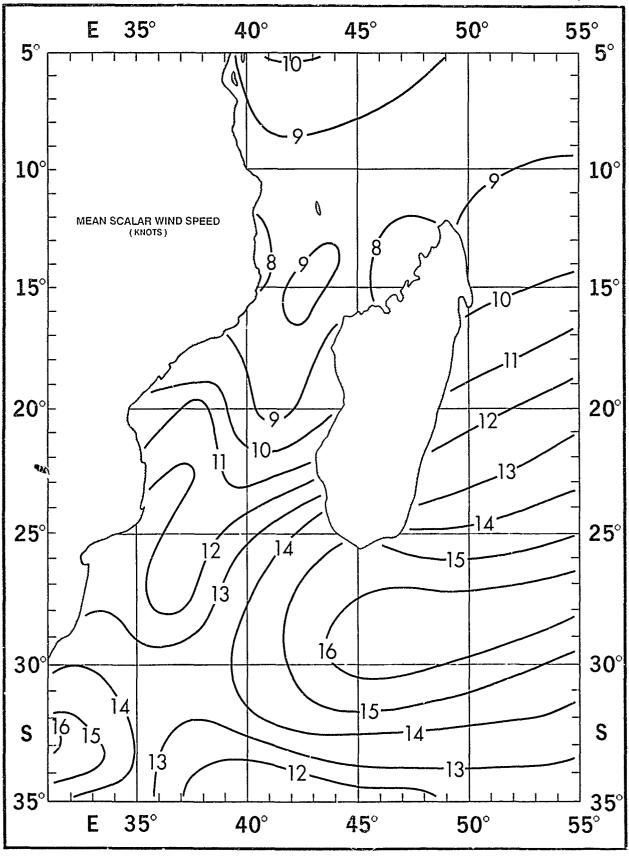


Wind - Visibility - Cloudiness



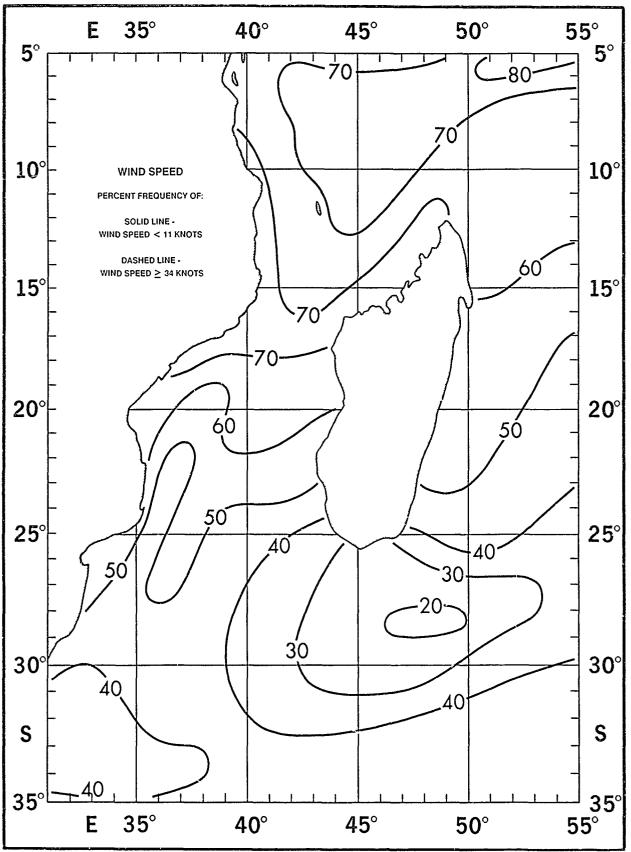


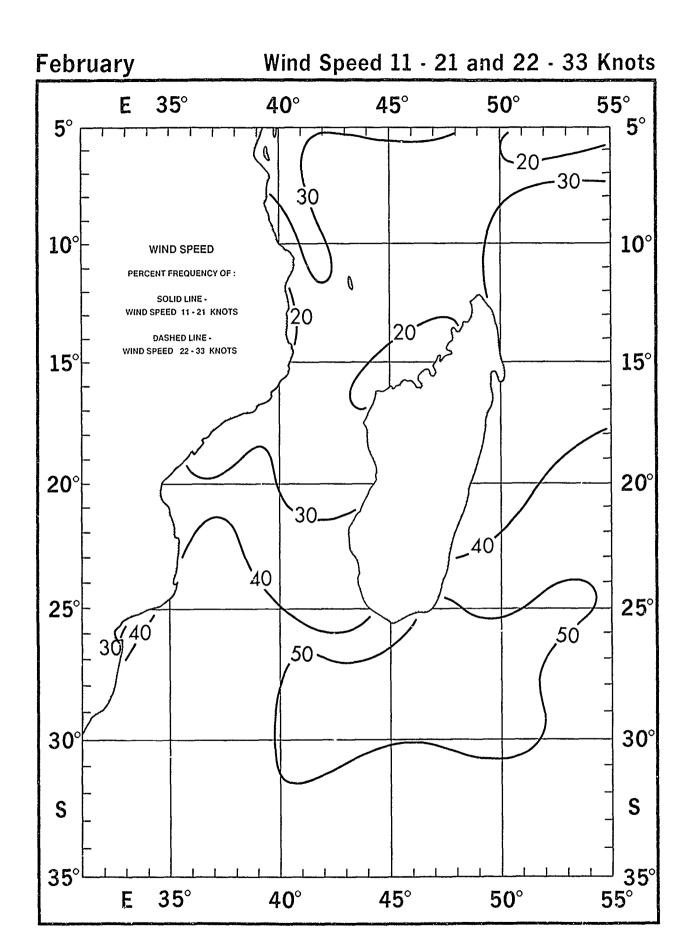
Mean Scalar Wind Speed

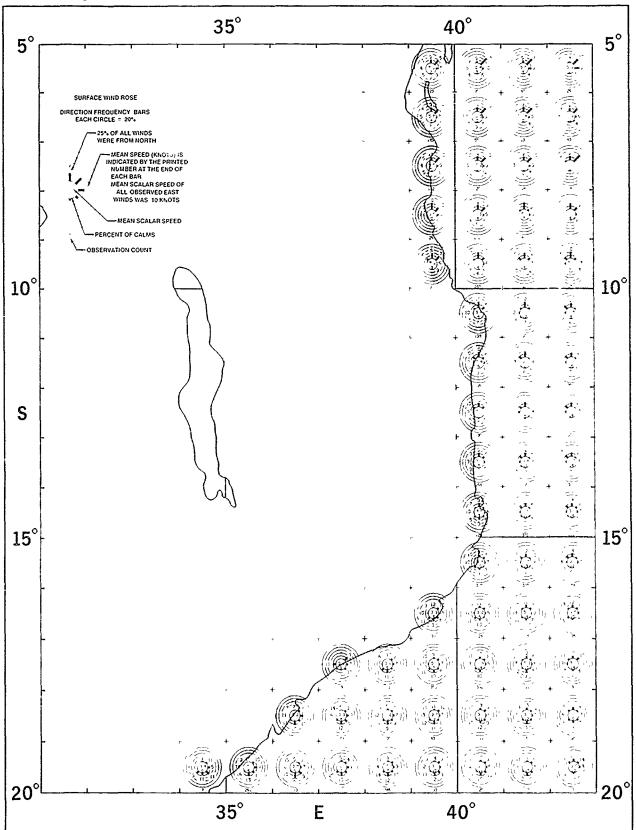


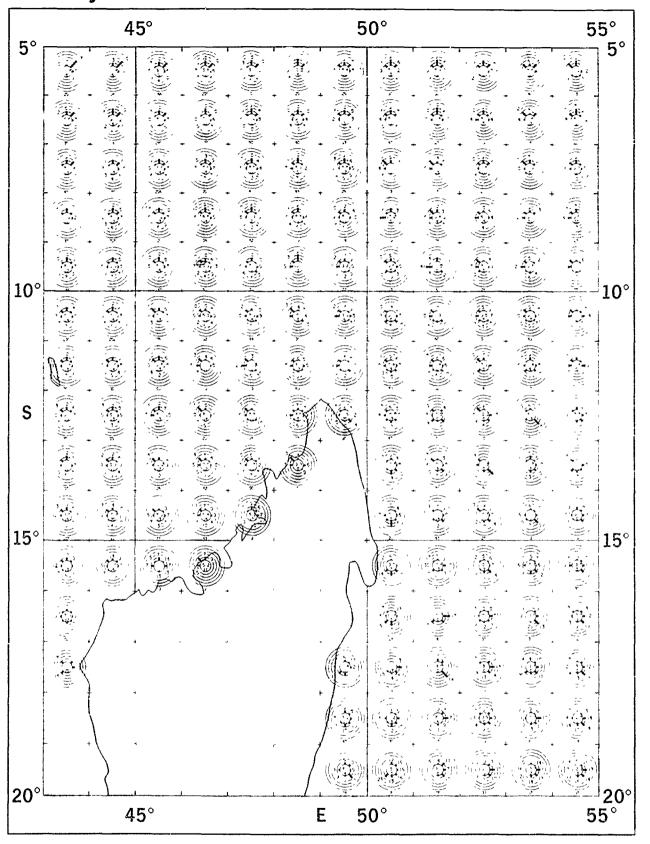


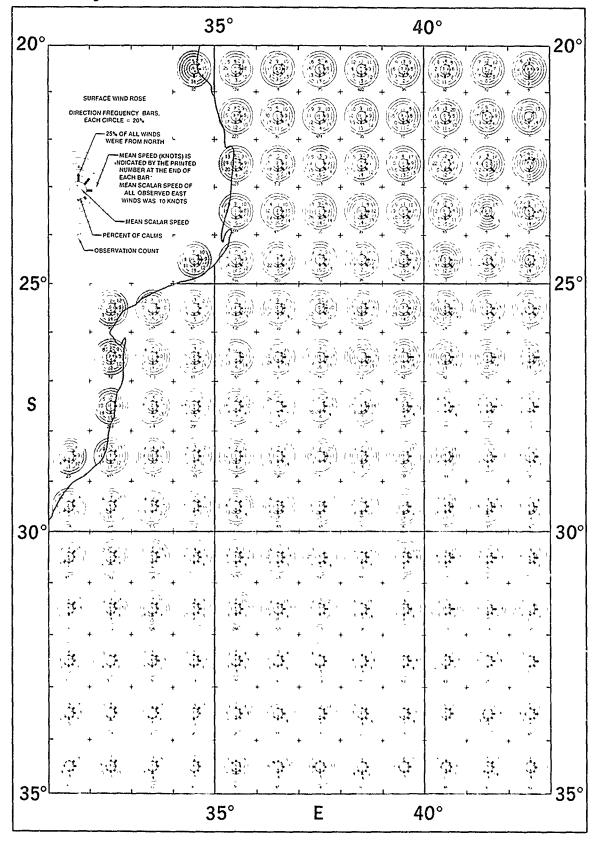
Wind Speed <11 and ≥34 Knots

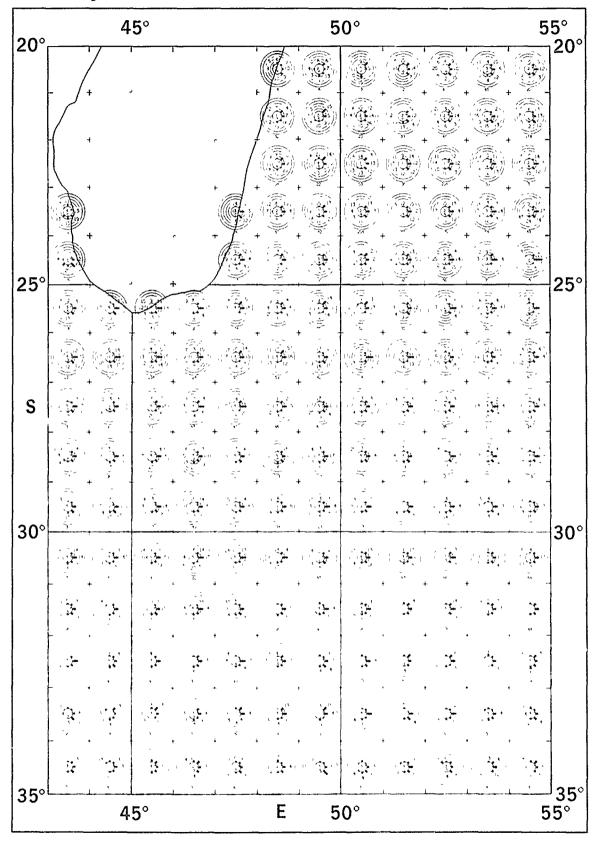






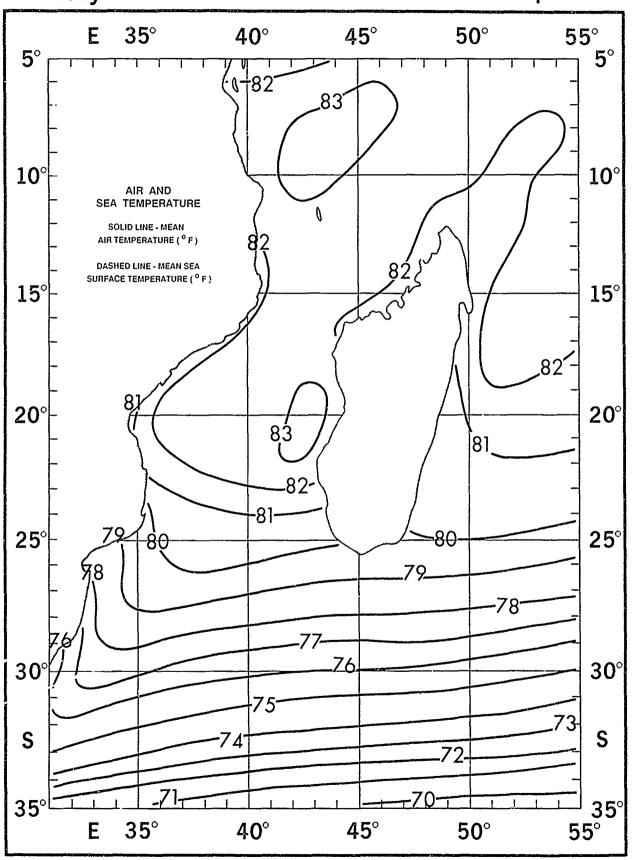


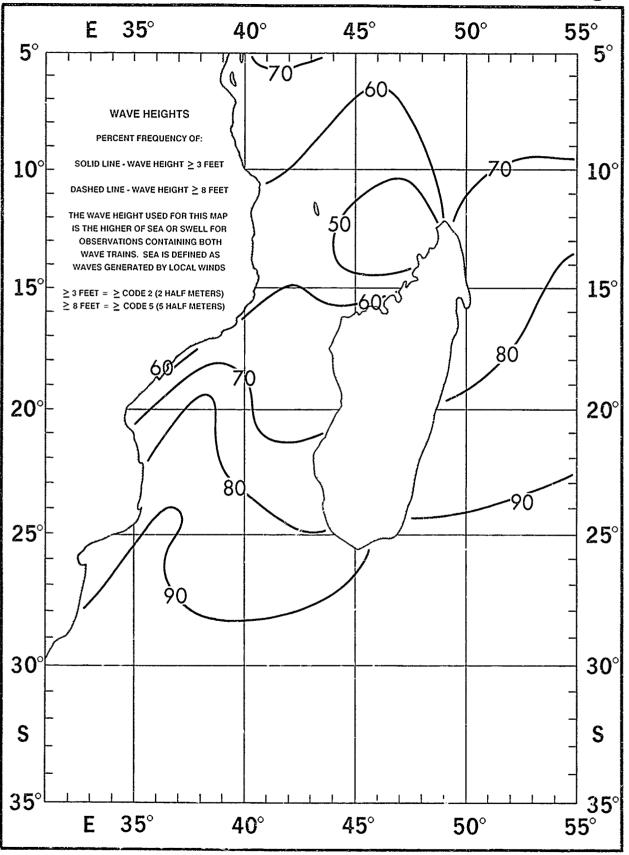


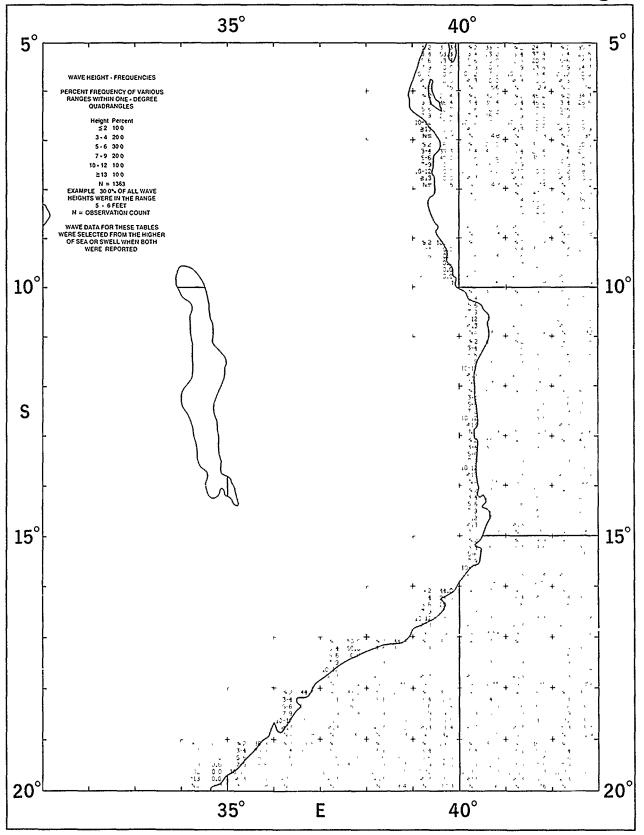


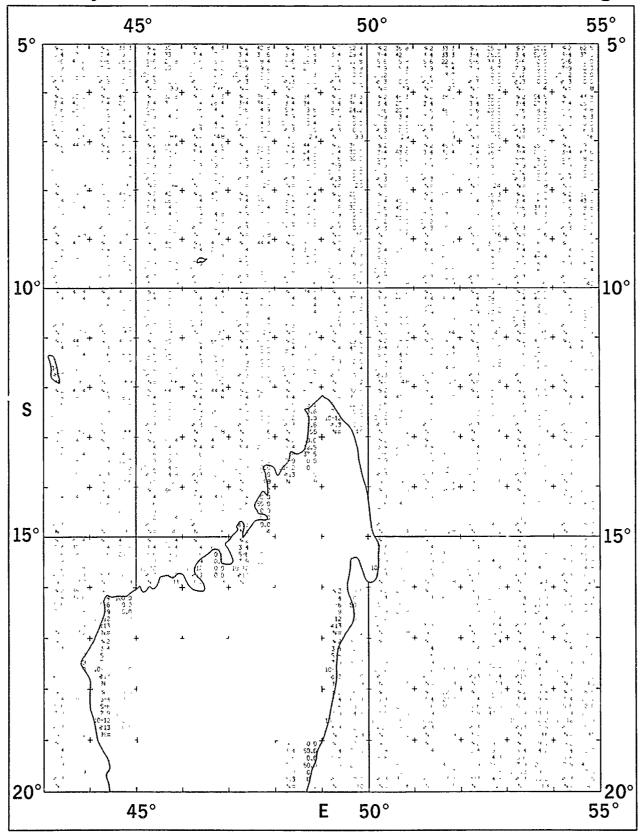


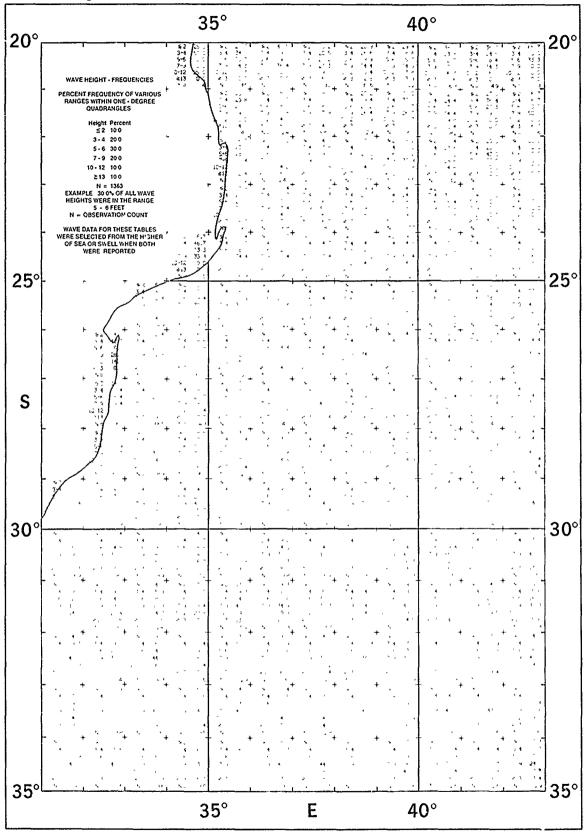
Air and Sea Temperature

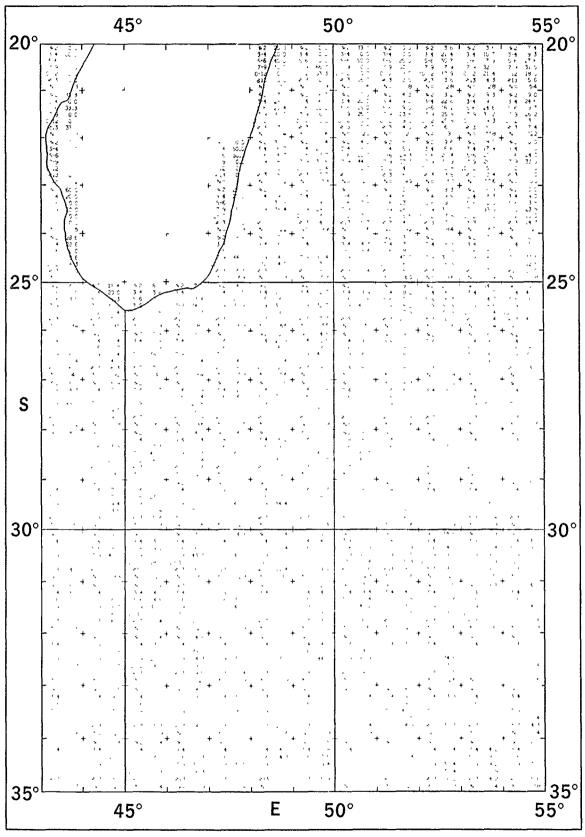


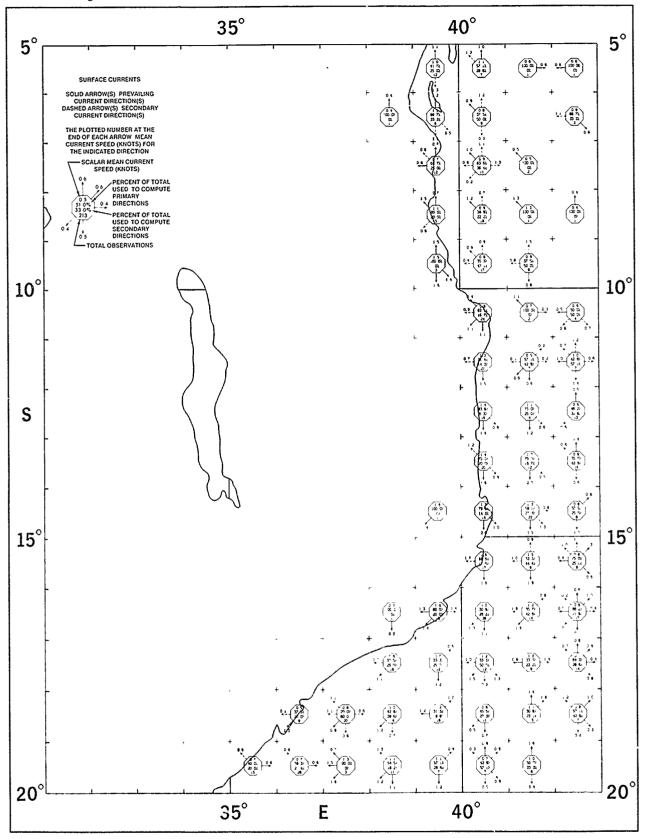


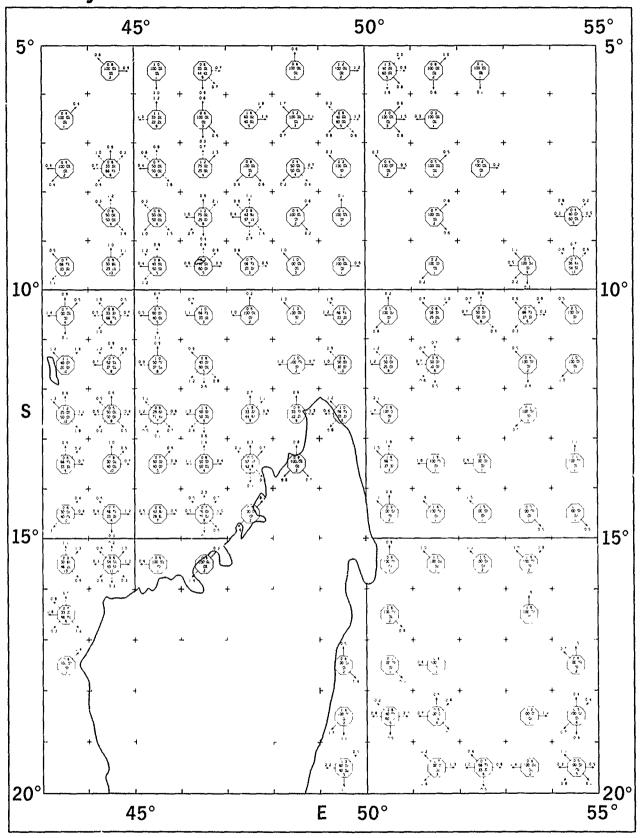


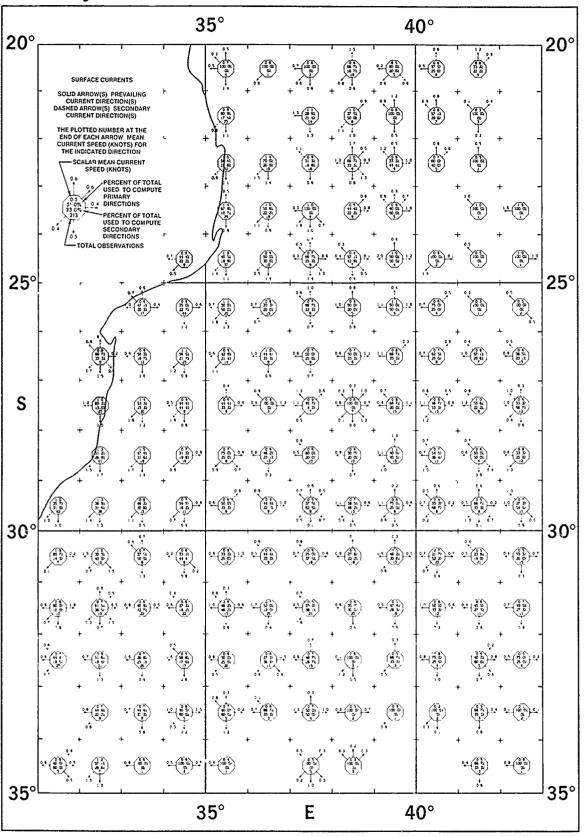


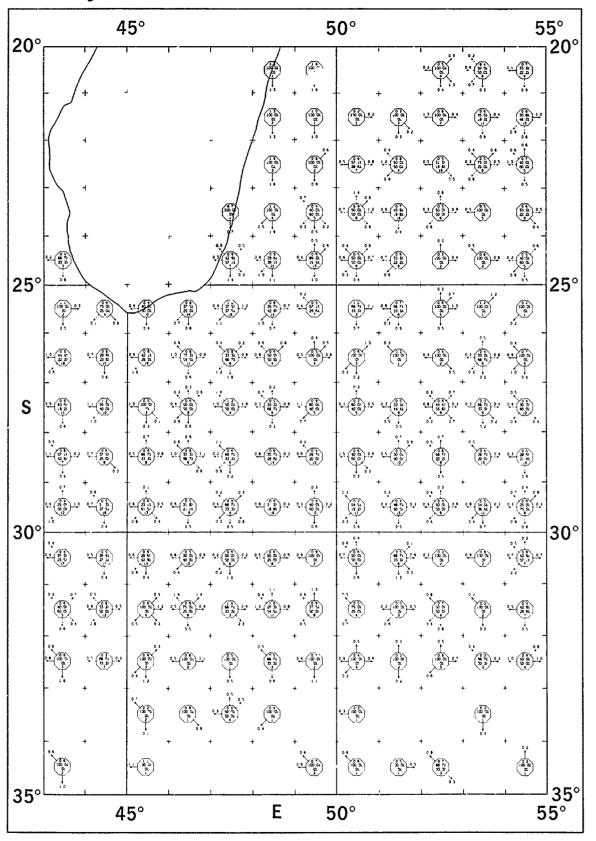


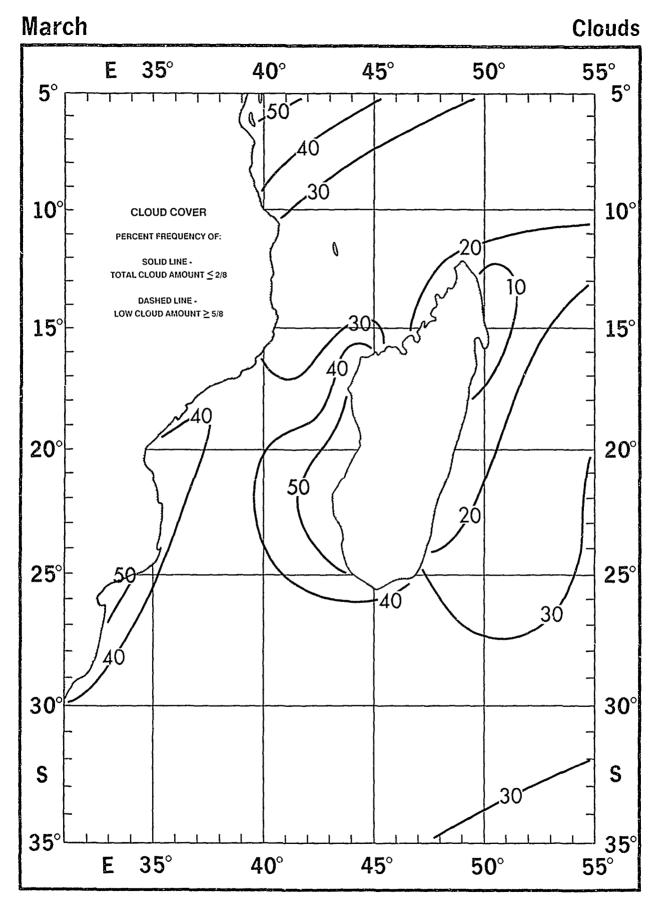


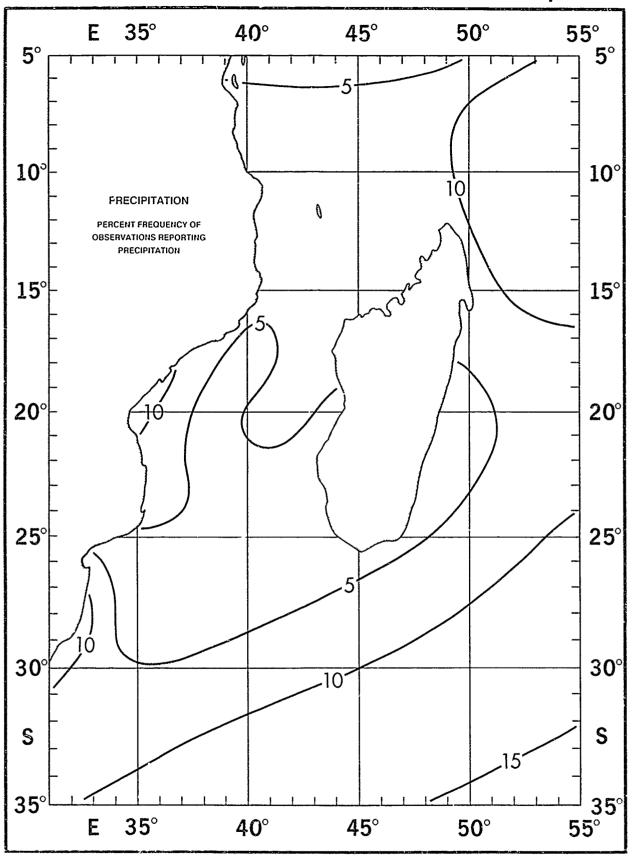




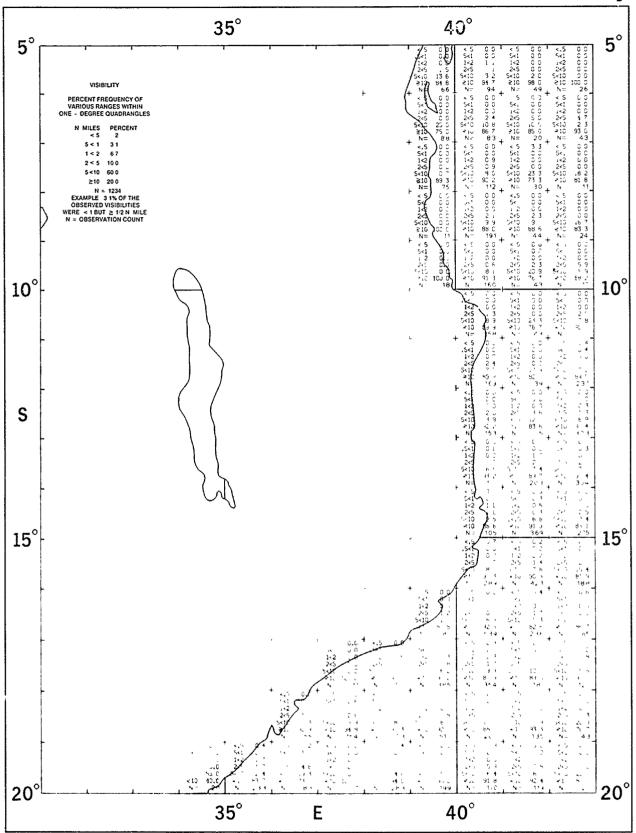




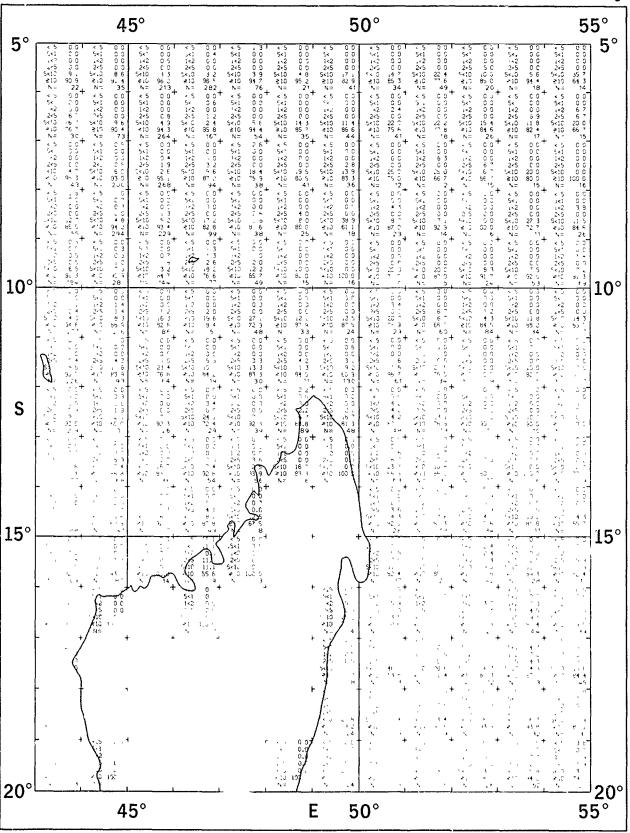




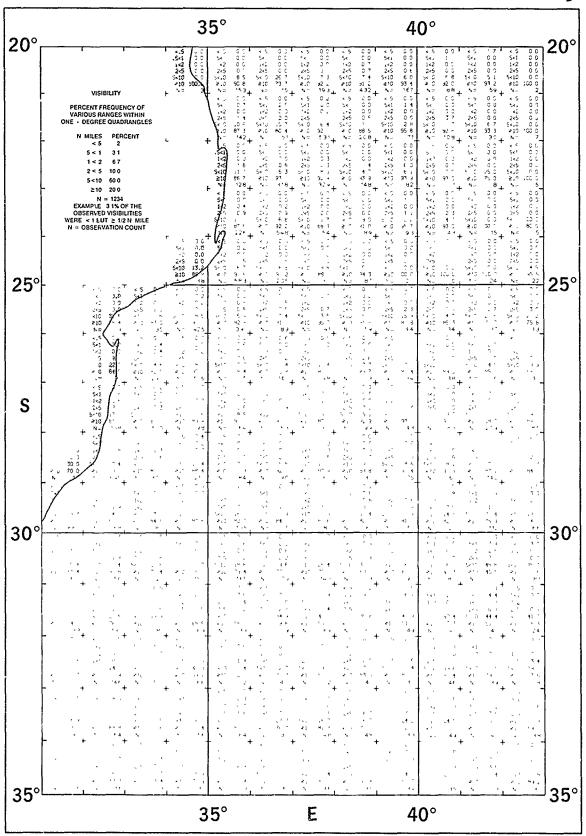
March Visibility



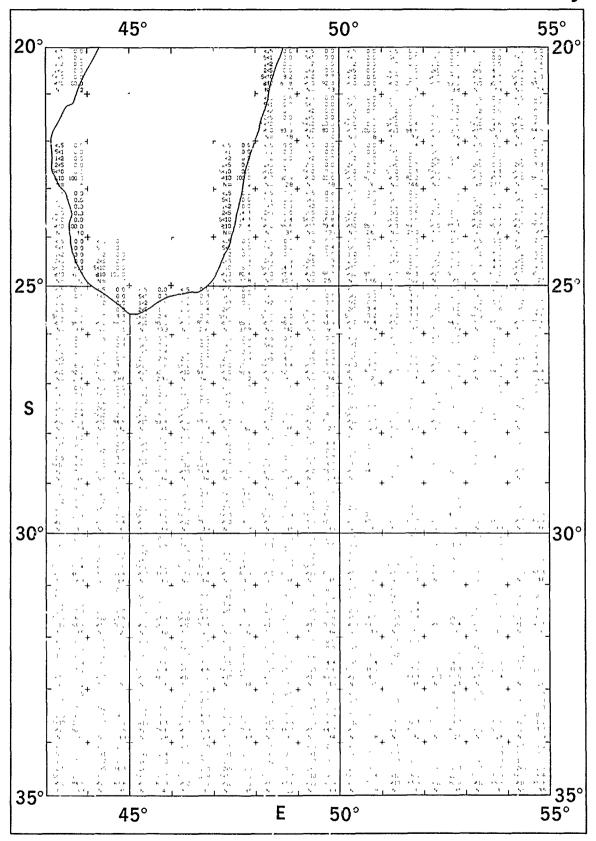
March



March

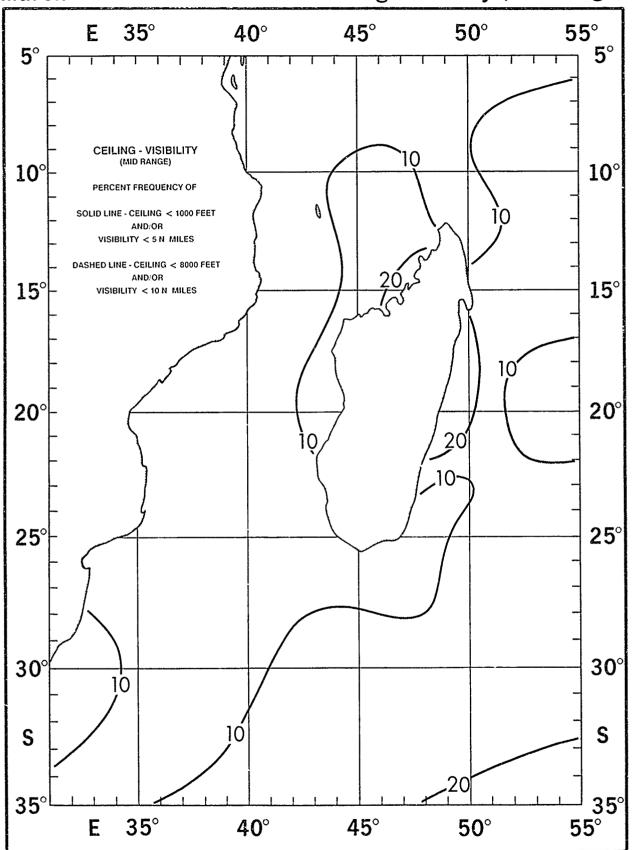


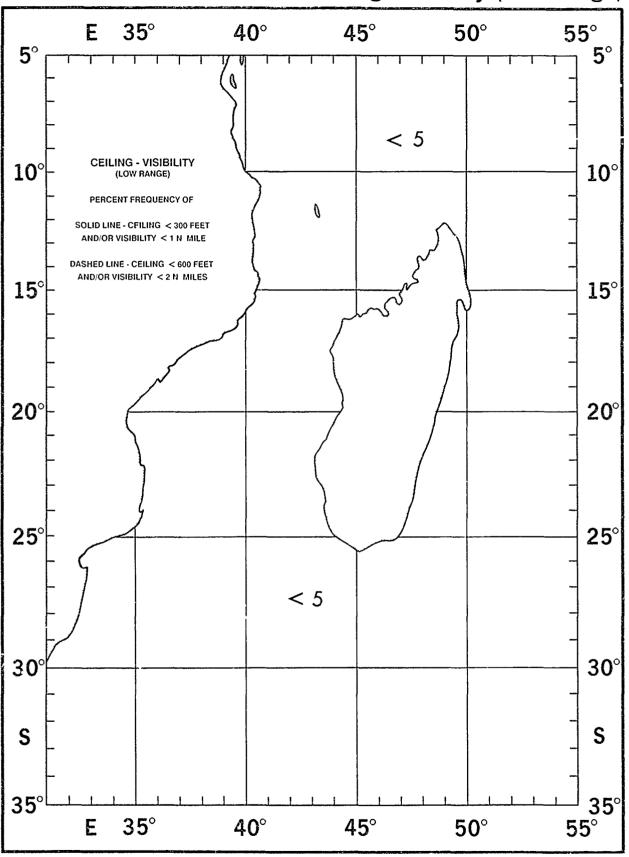
March

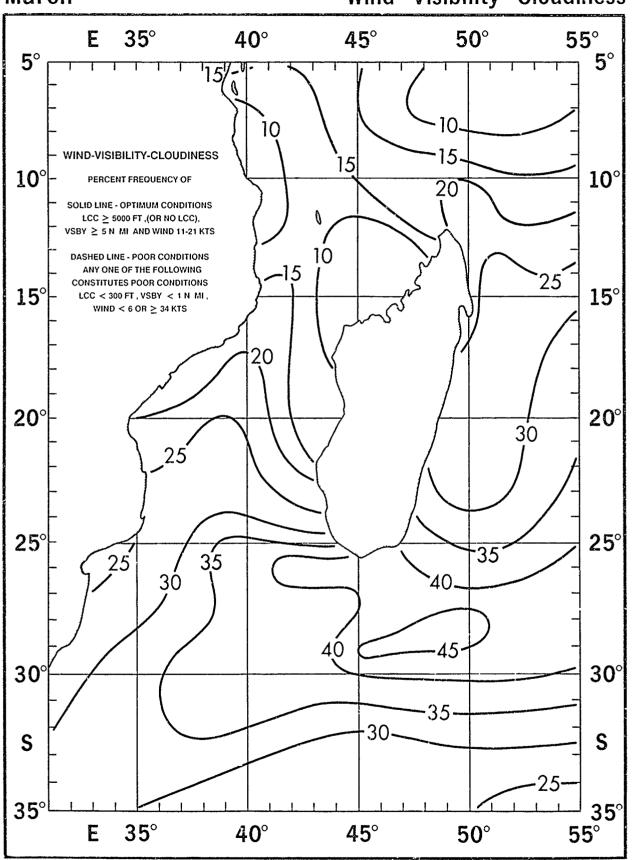


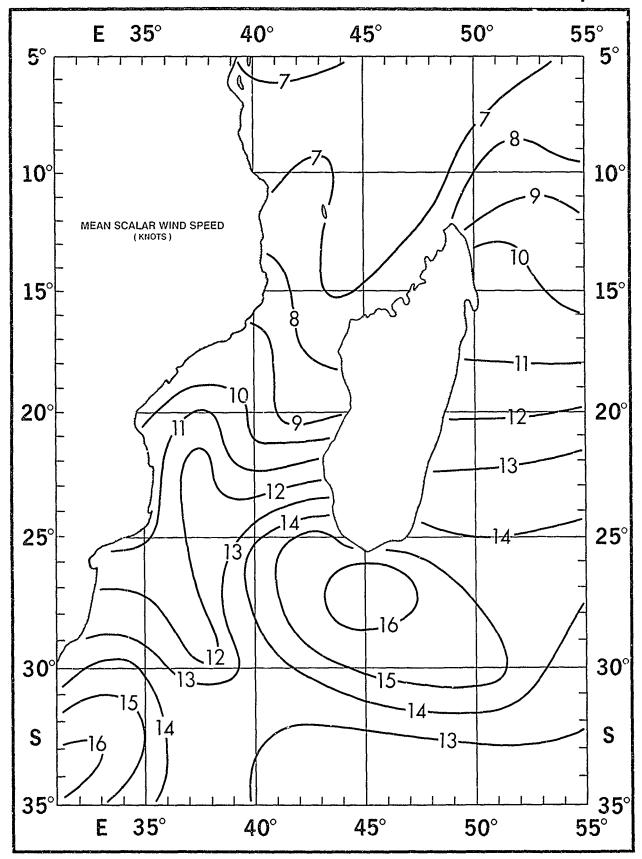


Ceiling - Visibility (Mid Range)

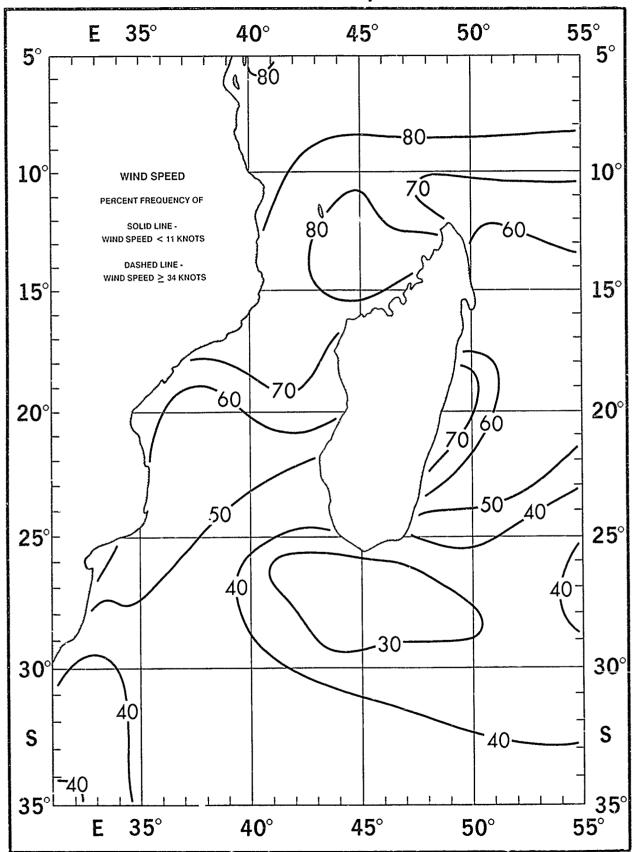


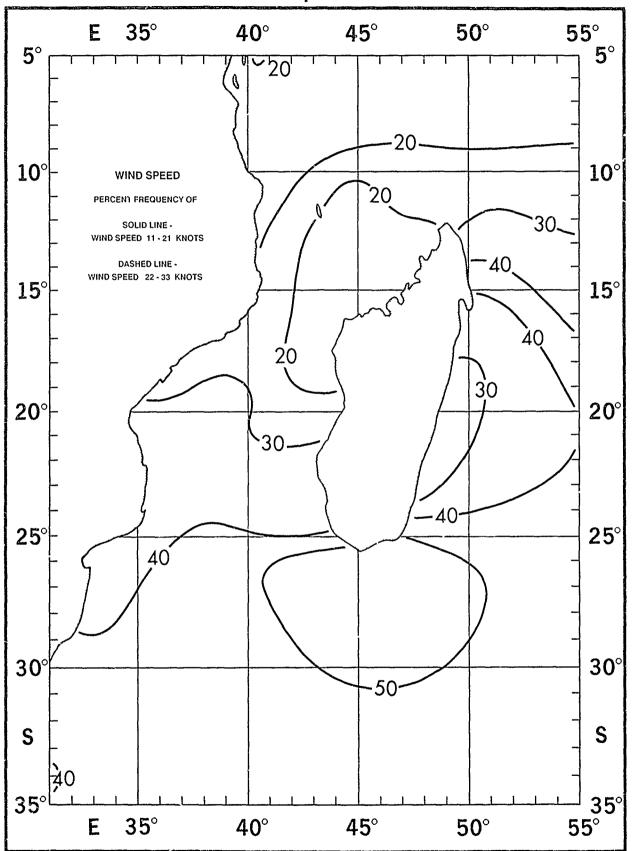


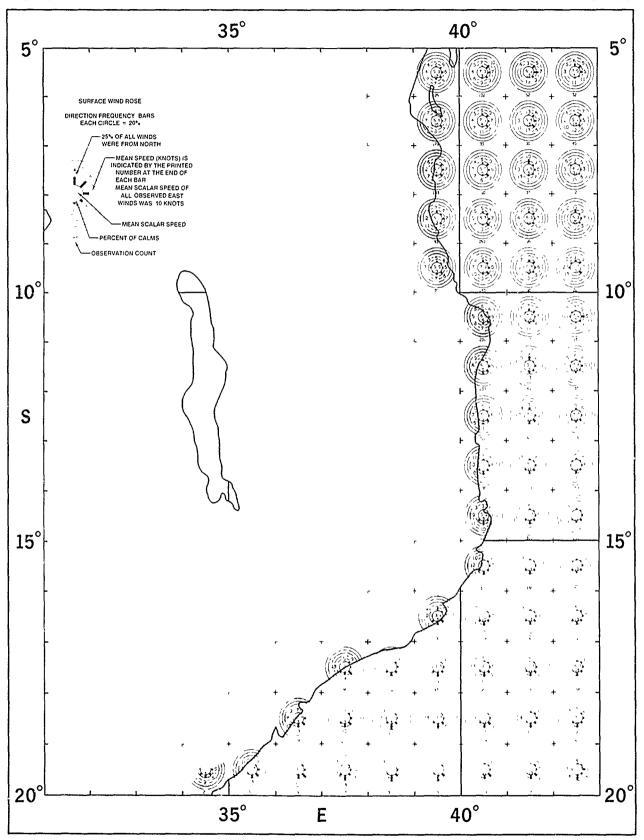


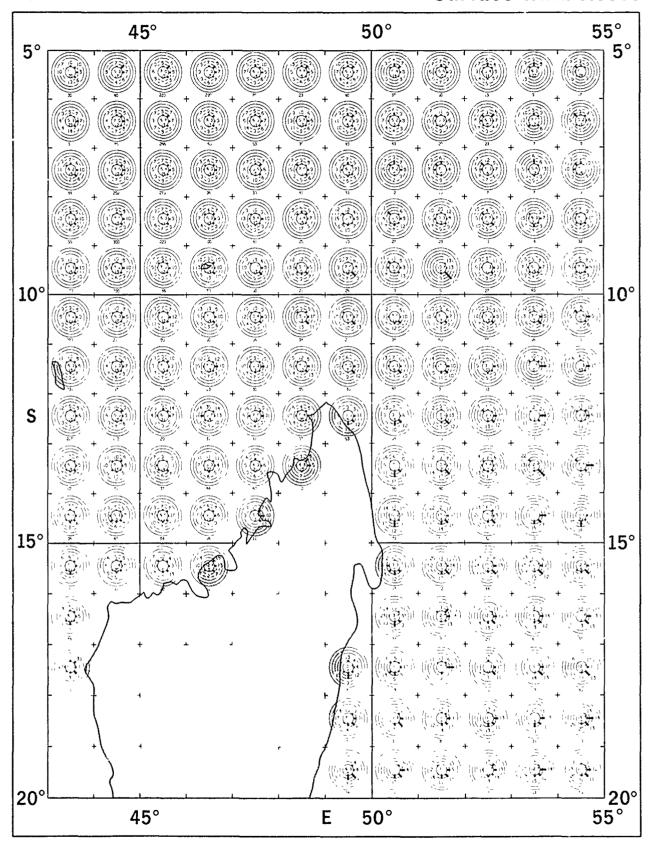


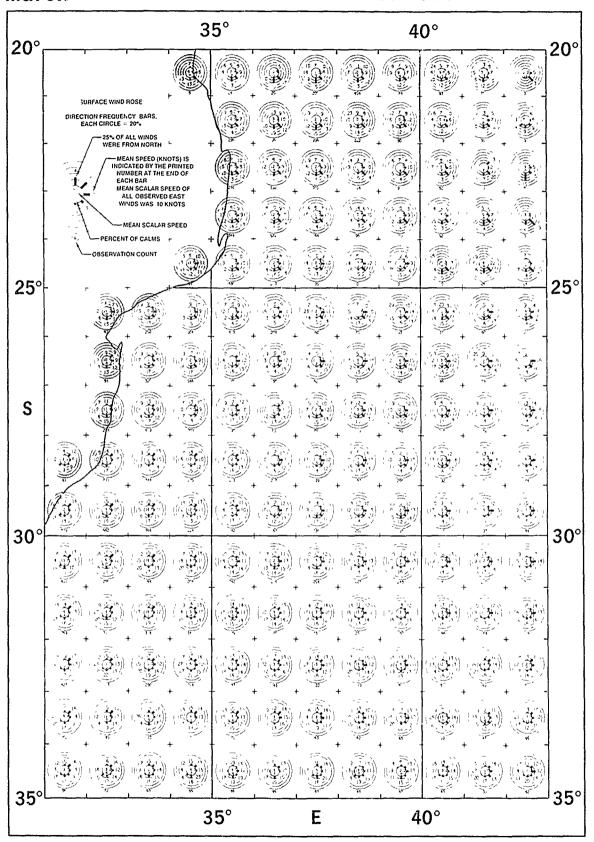
Wind Speed <11 and ≥34 Knots

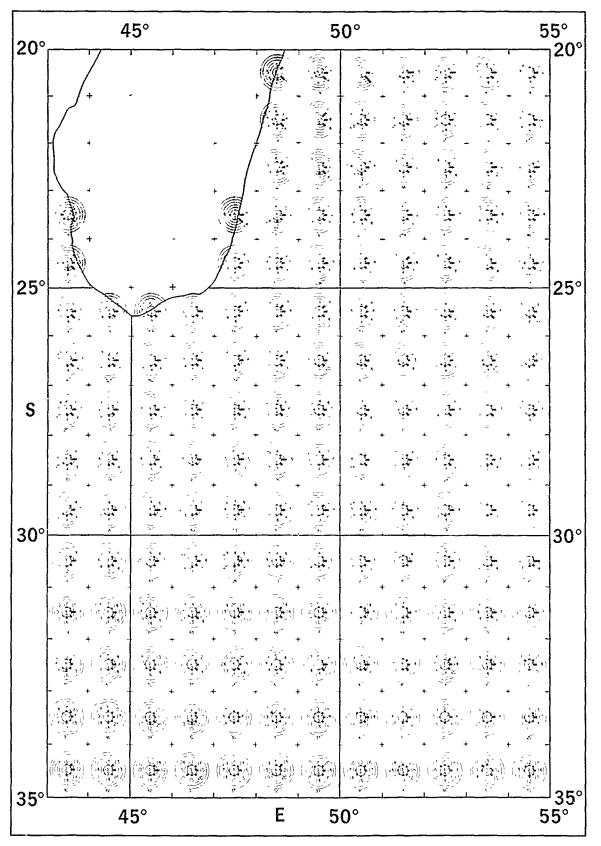






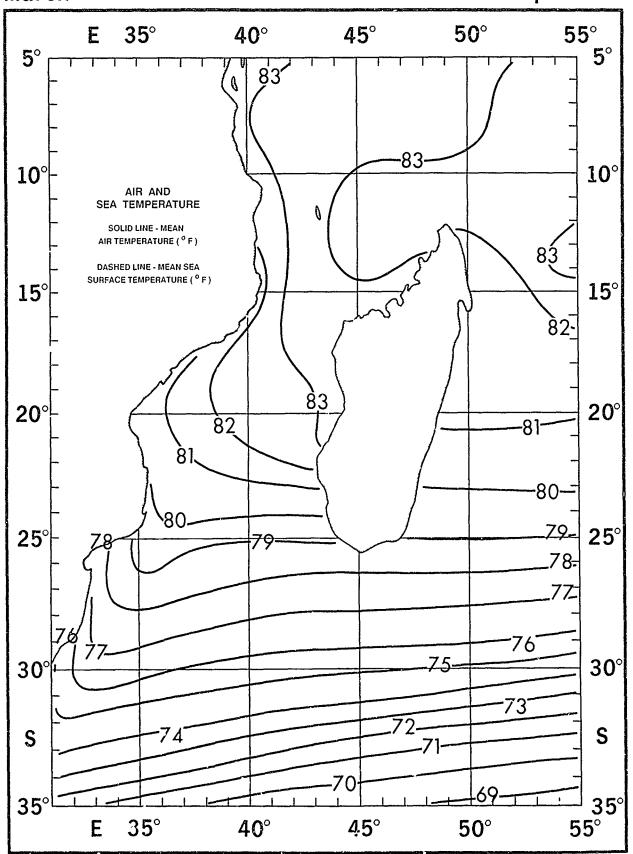




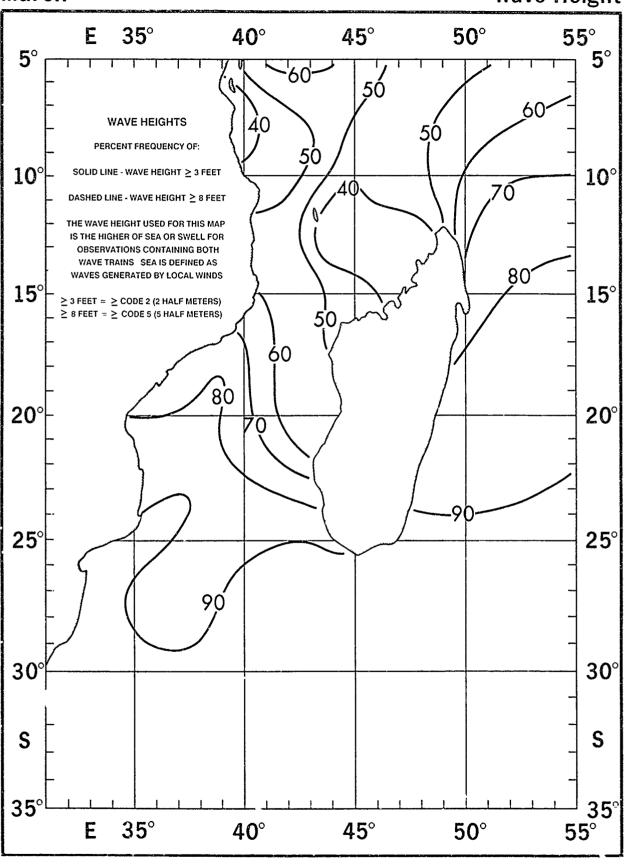


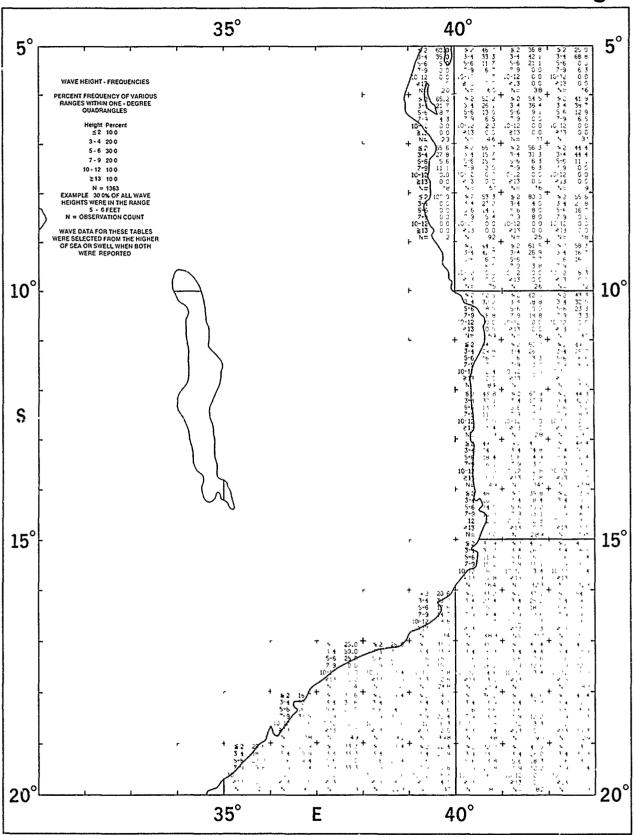


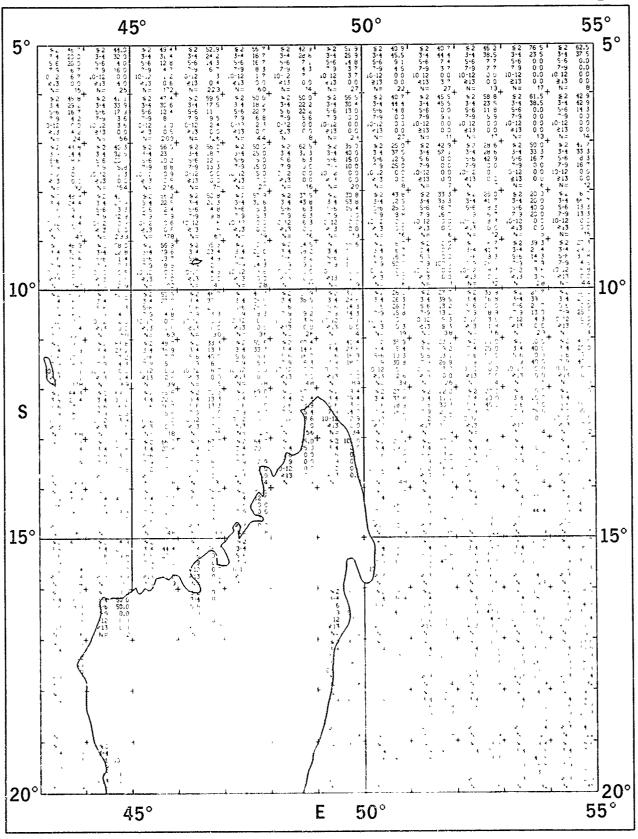
Air and Sea Temperature

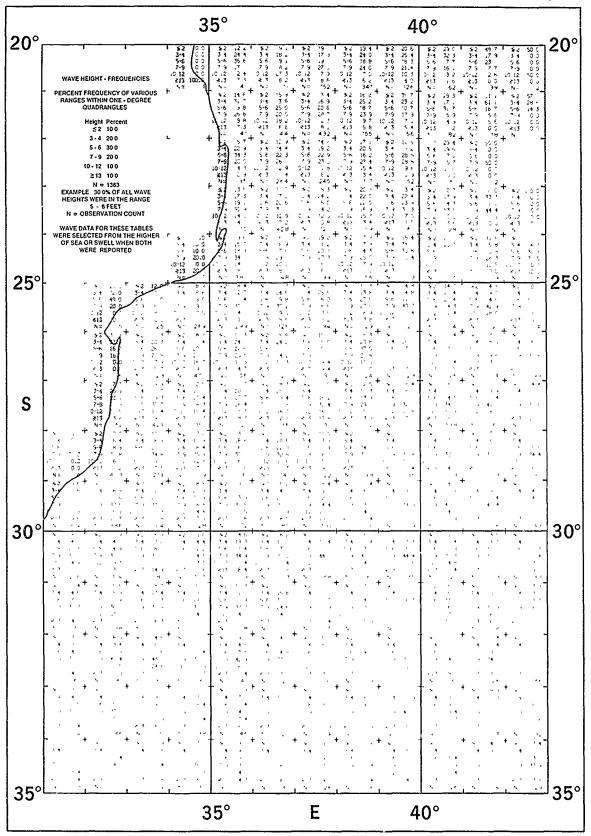




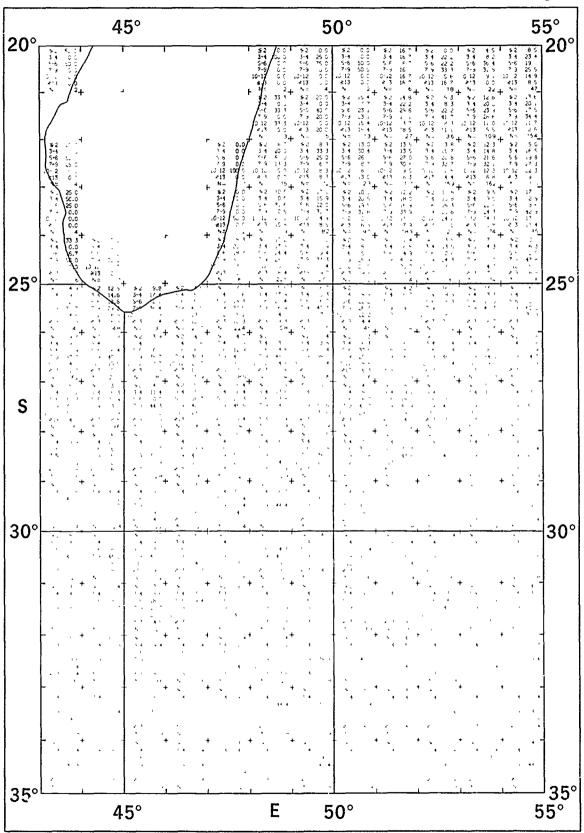


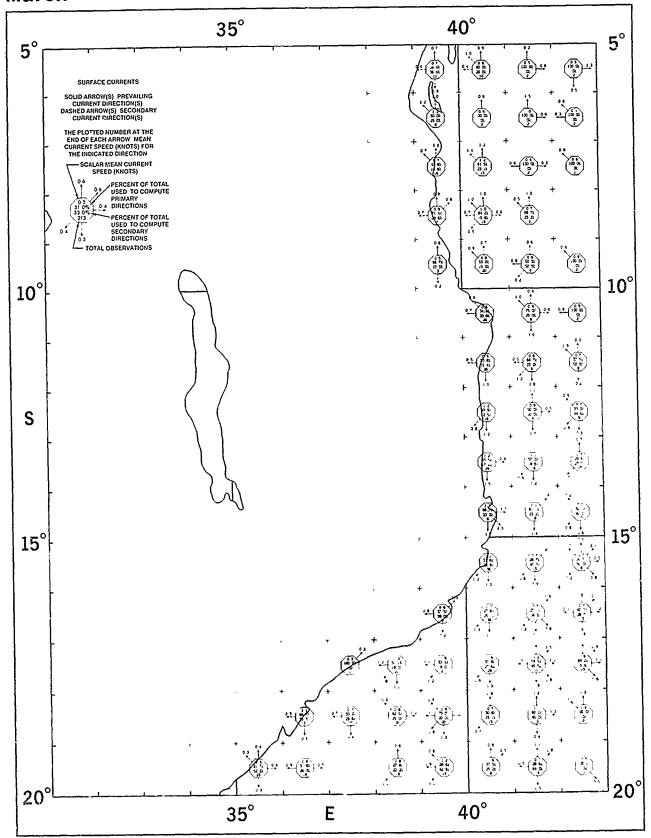


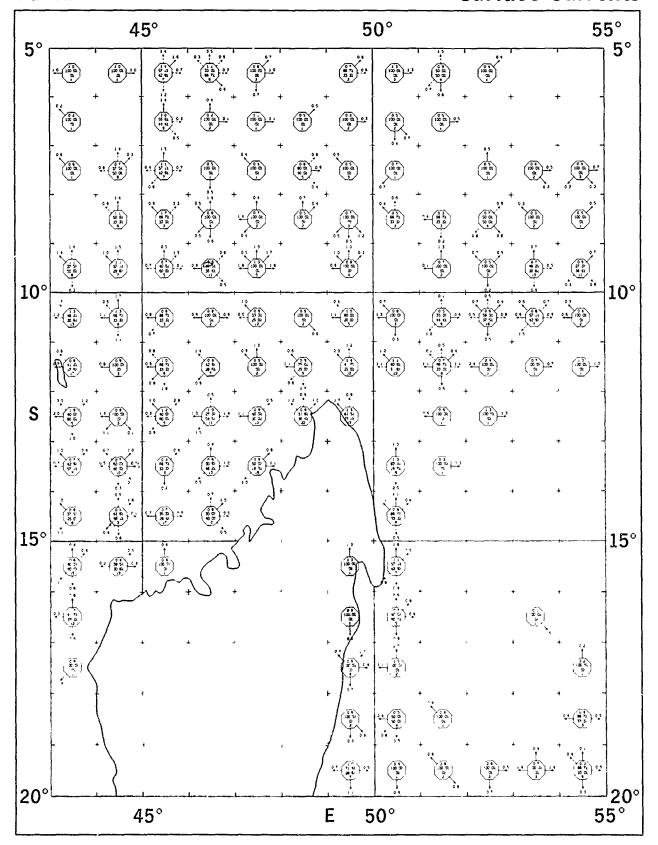


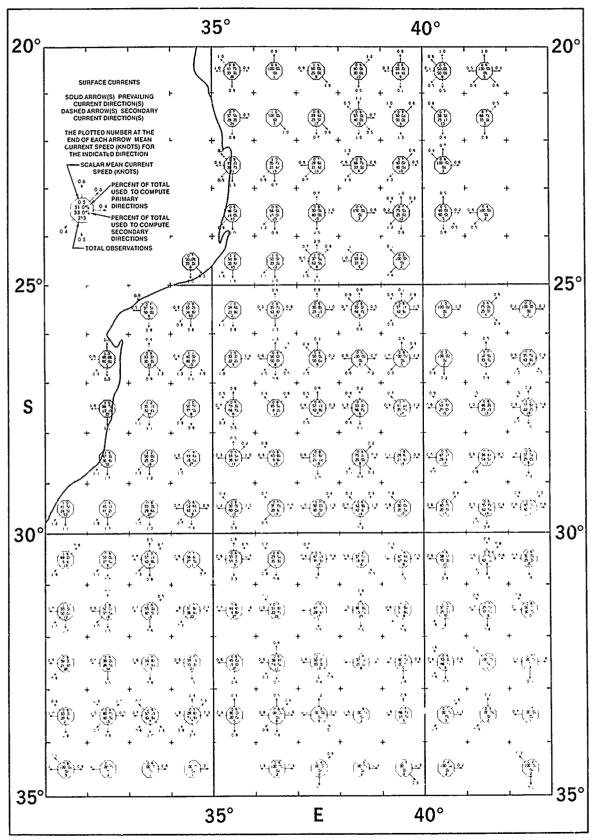


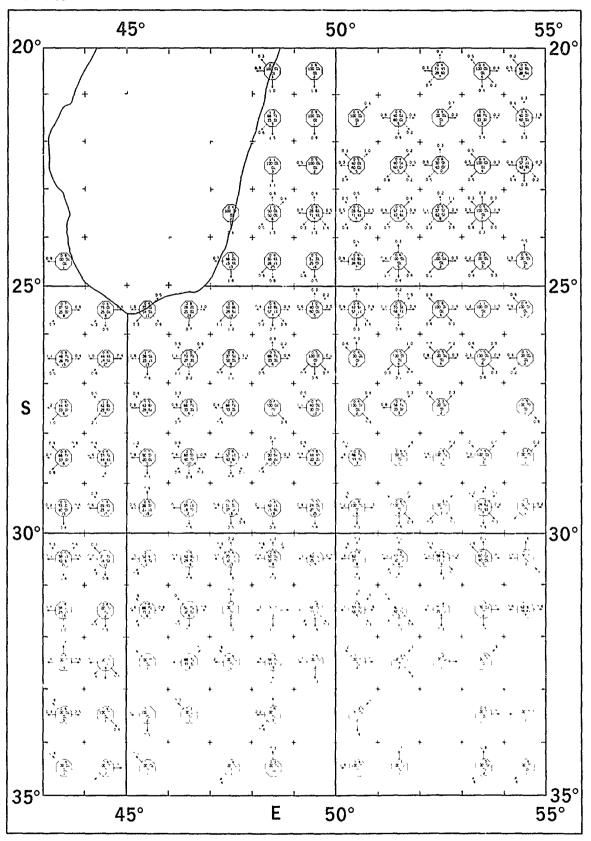


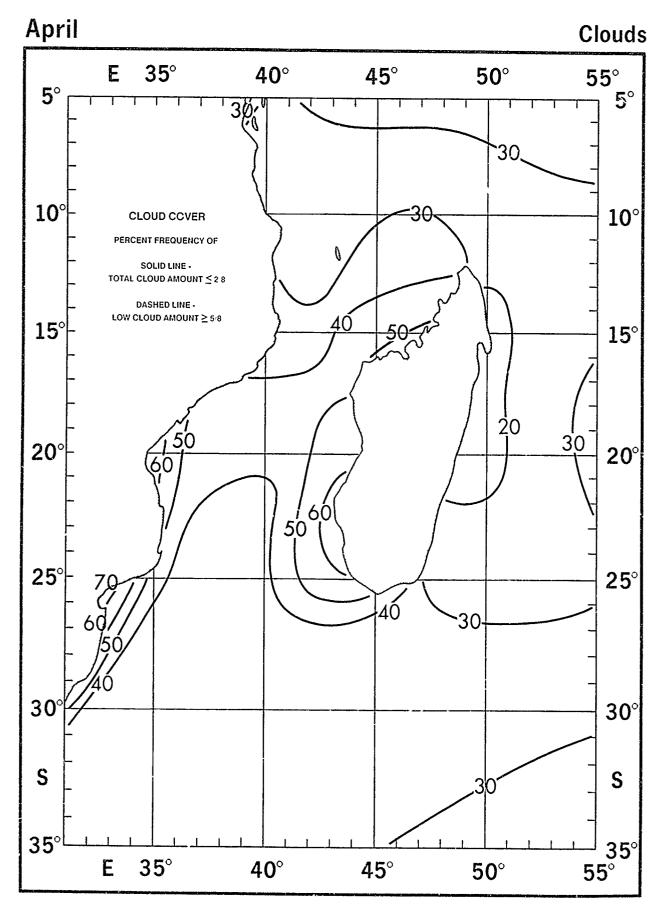


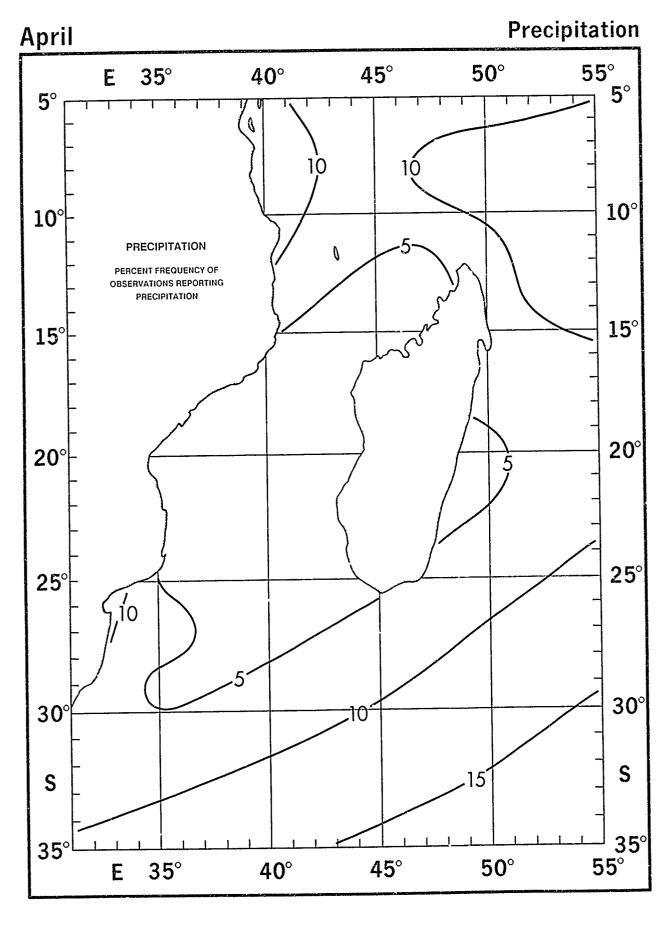


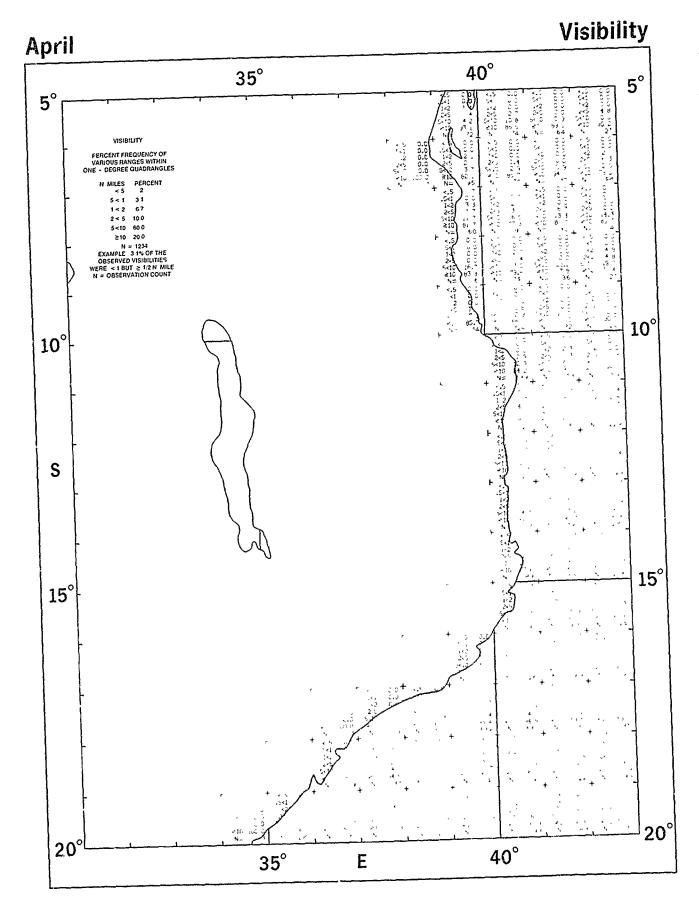






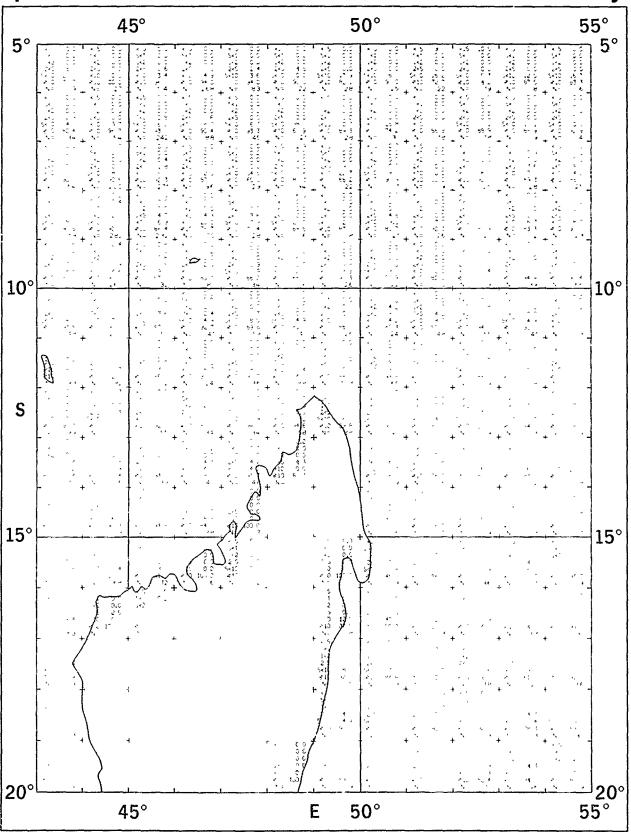








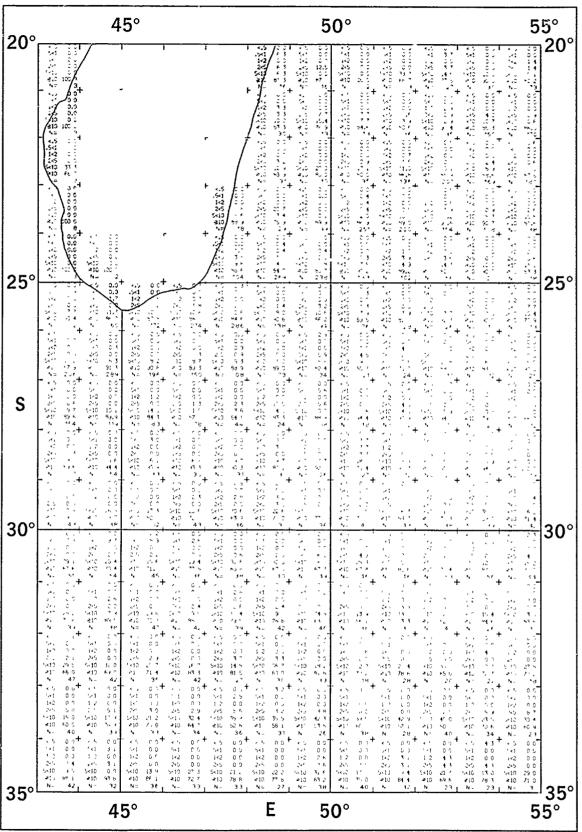
Visibility



Visibility

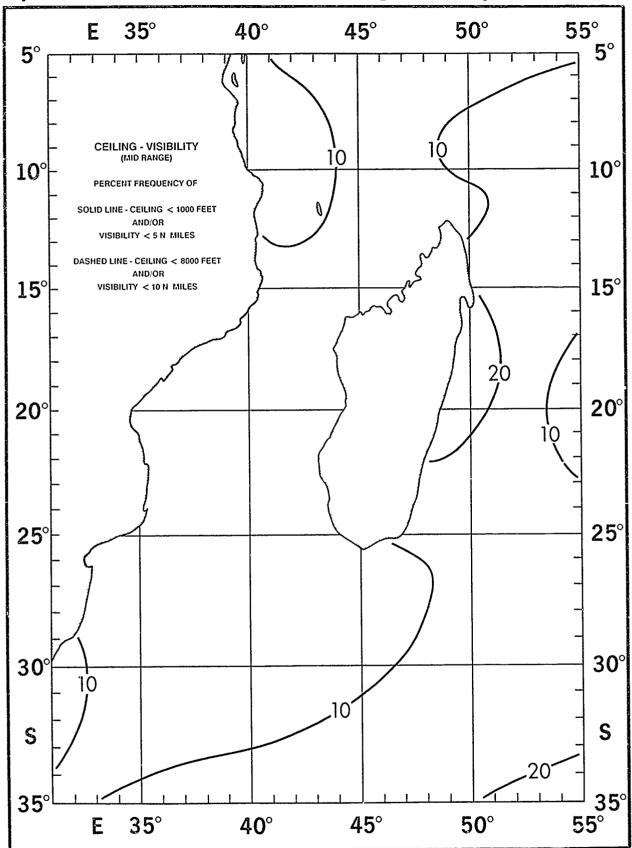
		35°	40°	
20°	,	45 00 45 00 45 541 00 541 00 541 142 00 42 13 42 25 00 25 00 25 540 0 540 7 1 540	00 45 00 45 00 45 05 45 00 4	20°
	VISIBILITY PERCENT FREQUENCY OF	\$10 100.5 \$10 91.3 \$10 N= 21 N= *49	22 N= 172 N= 307 N= 131 N= 0.0 <5 00 <5 00 <5 00 <5 00 <5	0 94 9 410 95.1 4.0 100.0 1 58 + N= 6* N= 9 0 0 45 0.0 45 0.0 0 0 541 0 0 541 0 0
	VARIOUS RANGES WITHIN OHE - DEGREE QUADRANGLES N MILES PERCENT <.5 .2	142 00 142 245 00 445 410 414 5410 10 95.6 210 4 137 5 5	00 541 04 541 00 541 00 54 00 142 00 142 00 142 00 141 00 255 1.3 245 00 245 00 245 17 540 14 540 16 540 22 541 540 46 552 3.0 378 211 40 17 456 18 186 18 45	2 00 42 00 142 00 5 13 245 00 245 00 5 117 5410 1A 2 5410 00 5 A75 ≥10 91 6 ≥10 20.0
	.5 < 1 31 1 < 2 6.7 2 < 5 100 5 < 10 600	15 0.0 4.5 151 0.0 54 122 0.0 142 261 0.0 245 540 7.9 54,0	\$\\ \frac{\circ}{\circ} \circ^2 \circ^2 \circ \frac{\circ}{\circ} \cir	5 0.0 ' 45 00 ' 45 00
	≥10 200 N ≥ 1234 EXAMPLE: 3.1% OF THE OBSERVED VISIBILITIES	310 41 3 ≥10 F N1 126 + 15 F 4.5 0 0 4.5 S4 0 0 541 142 0 0 142	93 8 210 90 4 210 92 4 20 90 1 21 9324 N= 902 N= 111 N= 79 00 4 < 00 45 00 45 00 45 00 60 02 51 00 51 00 51 00 51 00 51 02 12 06 12 00 12	: 6f N= 10 N= 5 5 00 < 5 00 < 5 00 6 00 54 00 54 00 7 00 54 00 54 00
	WERE < 1 BUT ≥ 1/2 N MILE N = OBSERVATION COUNT	2/5 0.5 2.5 5/10 #7 5-10 10 %7 210 10 %7 210 1 143 + 12 1 0.2 + 12	245 00 245 16 245 00 0 55 51 5410 85 5410 79 5410 35 544 5410 90 8 3410 805 810 805 810 805 810 805 810 810 810 810 810 810 810 810 810 810	0 61 5<10 13 3 × 0 0 0 0 63 7 410 65 7 410 100 0 - 3° 4 % = 15 4 % = 7
		541 0.0 .54. 0.2 541 142 0.0 42 0.2 142 245 0.0 245 0.9 245 5410 14.3 5410 6.2 5410 810 852 84.0 92 4 810	0.6 kst 0.0 5st 0.0 5st 0.0 5st 0.0 5st 12 12 12 12 0.0 1st 0.	0.0 541 0.0 541 0.0
25°	\$4, 0.0 .550 0.0 142 0.0 42 0.0 245 0.0 245 1.6	75 N= 579 N= 55 00 55 05 55 541 00 541 00 541 142 05 142 00 142 245 05 245 14 245	1/7 N= 11 N= 62 N= 19 N= 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00 4 00 45 00 23
	5:00 273 4:0 185 \$10 7:7 \$10 768 112 11 N= 15 - 4.5 0.6 5:0 5:0	5410 69 5410 79 5410 210 92 2 210 90 2 410 No 40" No 356 No 45 00 45 00 415 541 00 541 00 541	.02 54.0 7, 54.0 66 54.0 71 54.0 46 4 4 5 62.0 471 54.0 4	5 426 5410 57 5410 118 5 7 110 7 10 7 10 8 10 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	*42 2 1 142 0 8 45 22 241 20 540 23 1 541 14 5	142 0 2 142 0 0 142 245 0 4 245 2 1 245 540 16 5410 16 5410 210 90 7 210 97 2 210 N= 454 N= 141 N=	00 45 00 142 00 142 10 140 00 00 45 00 45 00 25 00 25 00 25 00 45 00 25 00 45 00 25 00 45 00 45 00 25	0 0 142 00 143 07 0 0 245 00 145 4 0 143 5410 139 540 142 0 957 210 9514 23 1428
S	20 31 20 62 4 2	* * 5 0 0	00 1 4 5 0 0 1 4 5 0 0 1 4 5 0 0 1 4 5 0 0 1 4 5 0 0 1 4 5 0 0 1 4 5 0	5 00 T x 1 05 T x 5 0 1 T
	320 20 885 N= '51' N= 496 (-5 00+ -5 07' (-7 00 .54) 00 5-1 00	≥10 84 7 ≥10 99 5 ≥10 N= 150 N= 143 N= < 5 0.9 < 5 0.0 + ≤ 5 Sc1 C 0 Sc1 0 5 Sc1	#2 #10 #22 #10 #20 #10 #77 #16 56 N= 57 N= 100 N= 138 N= 00 45 00 45 08 45 01 45 00 61 06 541 00 541 07 64	9 91 h (2010) 43 h (2010) 47 f
	1/2 0.0 3/4 0.5 1/2 0.7 2/5 0.0 2/5 1.5 2/5 1.5 3/4 0.11 1.5 1.0 1.6 5/10 1.7 3/4 0.15 1.5 1.5 1.5 3/4 0.15 1.5 1.5 3/4 0.15 1.5 1.5 3/4 0.15 1.5 1.5 3/4 0.15 1.5 3/4 0.7 1.5 3/4 0.7 1.5 3/4 0.7 1.5 3/4 0.7 3/4	142 0.0 142 0.5 142 245 0.5 243 245 14 245 0.5 243 245 245 245 245 245 245 245 245 245 245	0.0 142 0.0 142 0.0 142 0.6 143 0.0 0.0 445 0.0 142 0.	2 2 2 4
		541 041 54 00 541 142 041 142 07 142 245 17 245 04 240 540 15 5 5410 21 0 540	00 T k	G n S x 1 g n S x 1 D t 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1
30°	7, 174 20 80 210 92 3, 70 N 505 N= 260 45 7 47 97 45 00 41 8 541 17 54 68 142 03 142 03 142 15	*10 82 2 *10 73,0 210 N 174 N- 100 N- 45 00 45 00 65 5<1 06 5<1 10 5<1 1<2 00 152	#7.9 #16 #16 #10 #7.9 #10 77.6 #26 14	2 741 ×10 747 ×10 746 115 N- 83 N- 67 15 0 5 0 0 5 0 0 5 1 1 8
	265 16 26 ,6 266 23 5610 2 × 5610 26 1 5610 27 3 210 76 210 70 210 69 2 No. 344 No. 134 No. 132	245 2.4 245 0.0 245 5410 24.4 5410 21.1 5410 210 72.1 210 27.3 210 N= 68 N= 199 N=	0.0 265 0.7 265 0.4 265 0.2 267 27.0 5610 3.7 6210 38.6 5410 3.7 6210 31.7 6217 18.8 210 67.0 210 68.6 210 65.7 216 67.0 210 68.6 210 65.7 216 67.0 210 68.6 210 65.7 216 67.0 210 68.6 210 65.7 216 67.0 210 68.6	0 2 3 245 0.0 245 0.0 0 41 4 5410 37 3 1410 30 9 0 55 7 210 62 1 210 75 5 0 70 N - 58 N 55
	54	\$41 0.7 541 1.7 541 42 0.0 142 24 0.0 142 25 0.0 245 0.3 240	2 2 4 1 1 6 5 1 1 7 5 6 4 5 1 1 7 5 6 1 1 7 5 6 1 1 7 5 6 1 1 7 5 6 1 1 7 5 6 1 1 7 5 6 1 1 7 5 6 1 1 7 5 6 1 1 7 5 6 1 1 7 5 6 1 1 7 5 6 1 1 7 5 6 1 1 7 5 6 1 1 7 5 6 1 1 7 5 6 1 1 7 5 6 1	10 25 00 25 00 25 00 40 548 49 541 28 20 344 00 42 00 4
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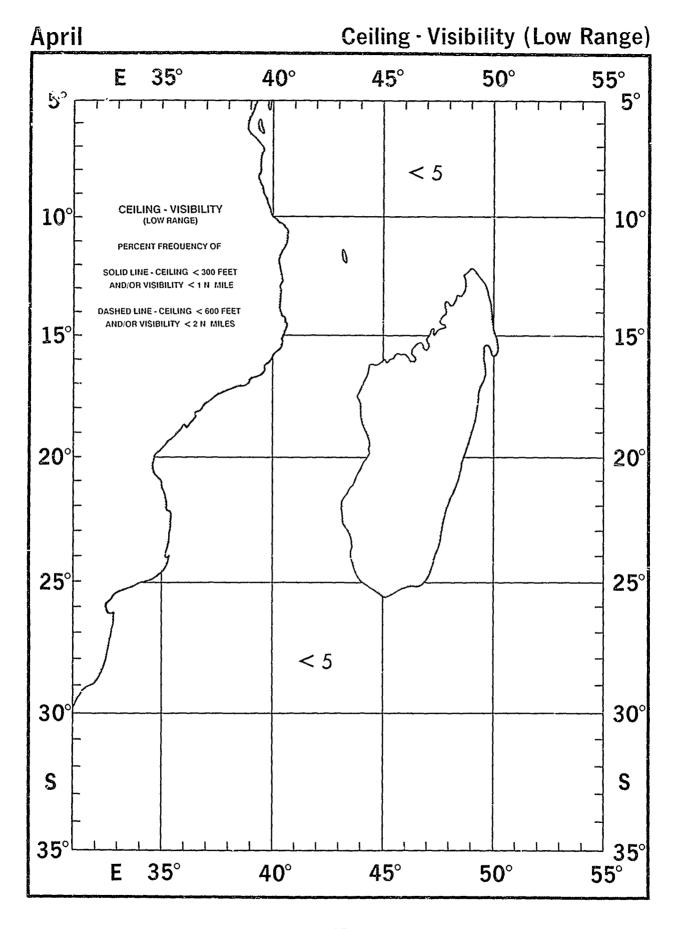
Visibility





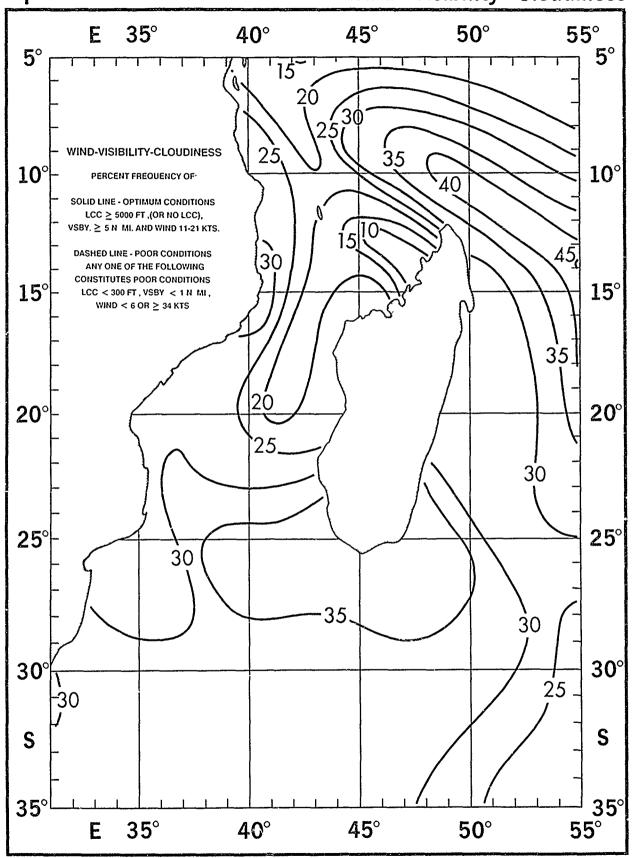
Ceiling - Visibility (Mid Range)

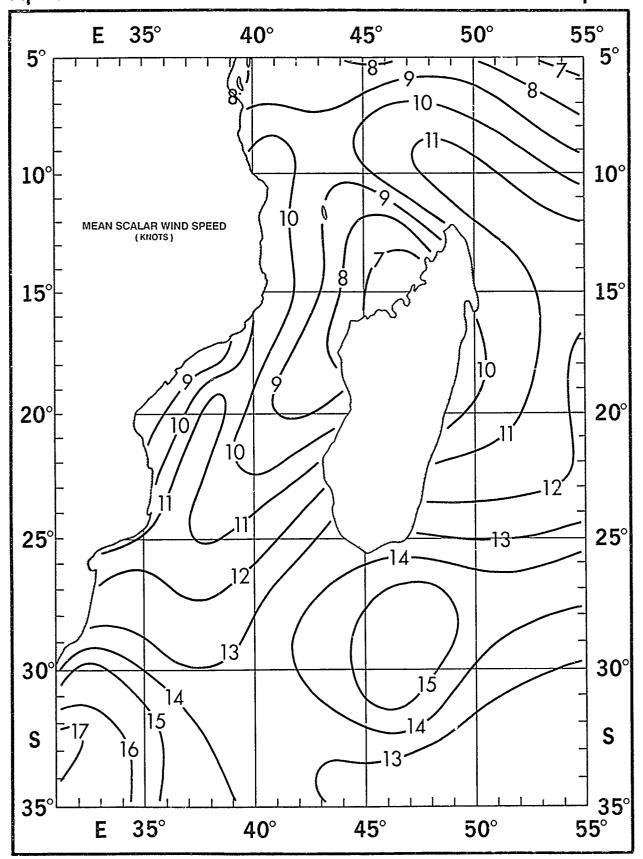






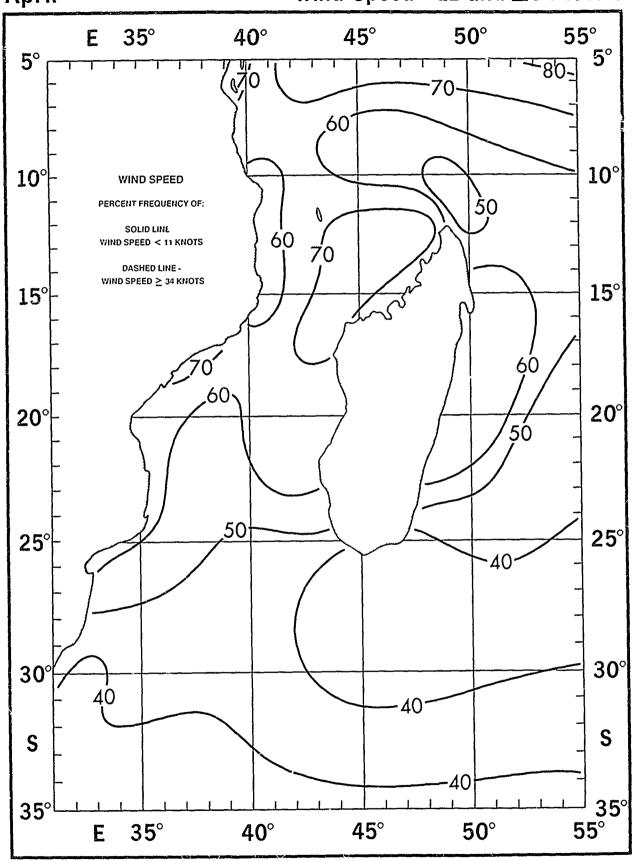
Wind - Visibility - Cloudiness





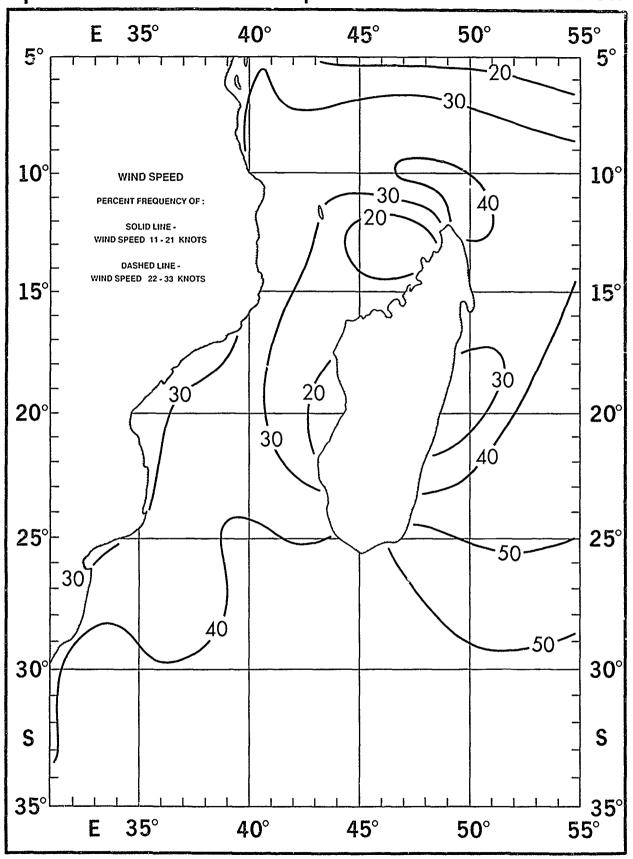


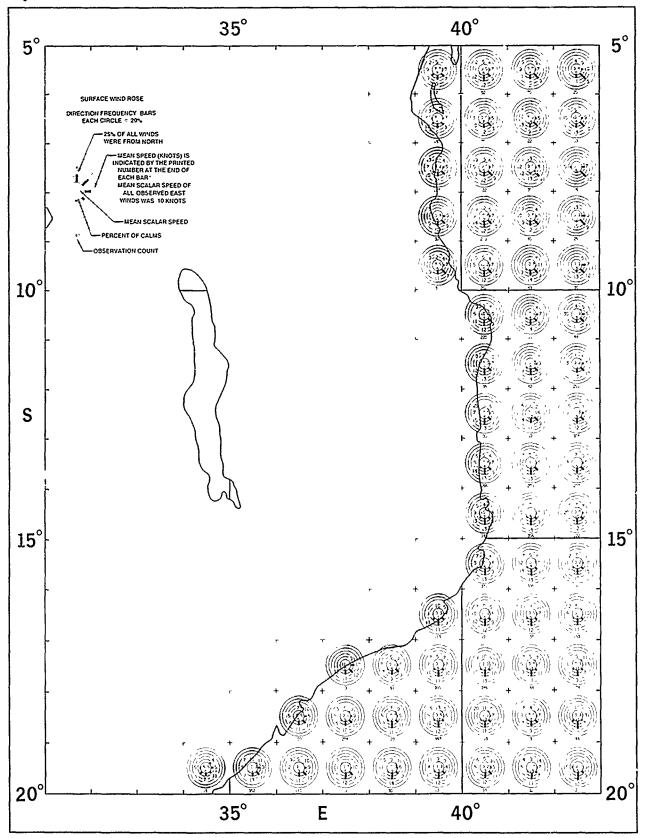
Wind Speed <11 and ≥34 Knots

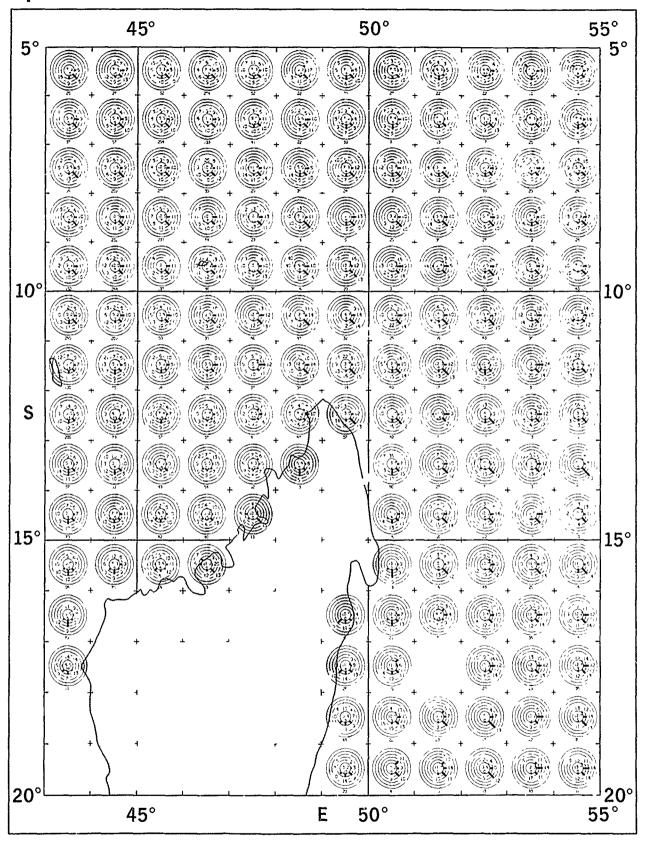


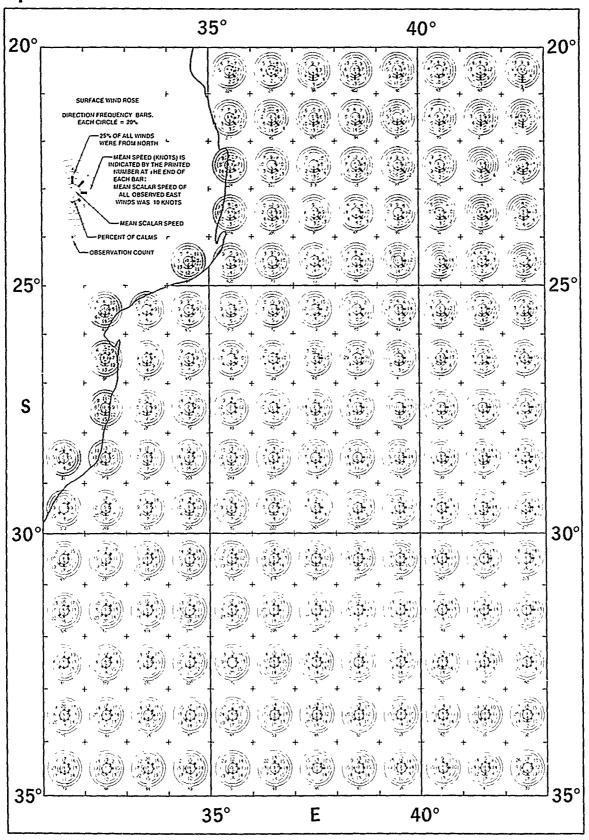


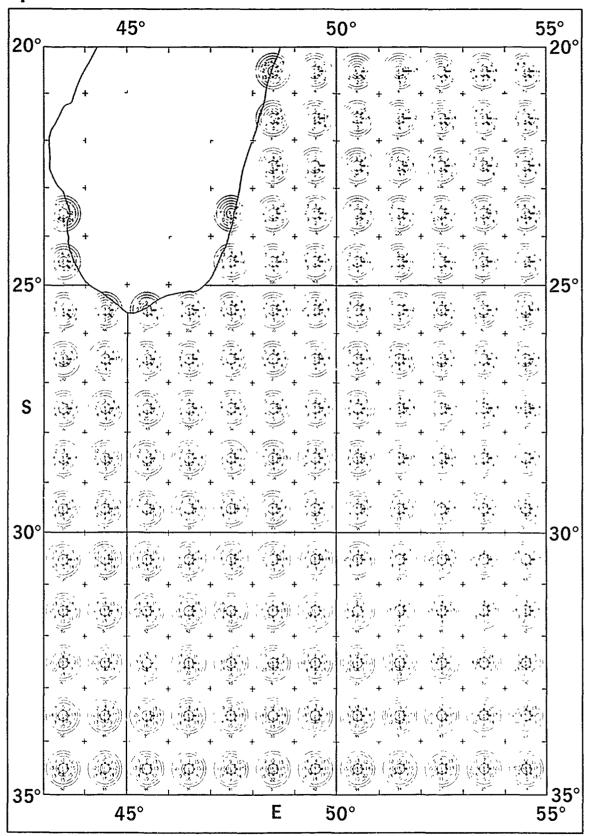
Wind Speed 11 - 21 and 22 - 33 Knots





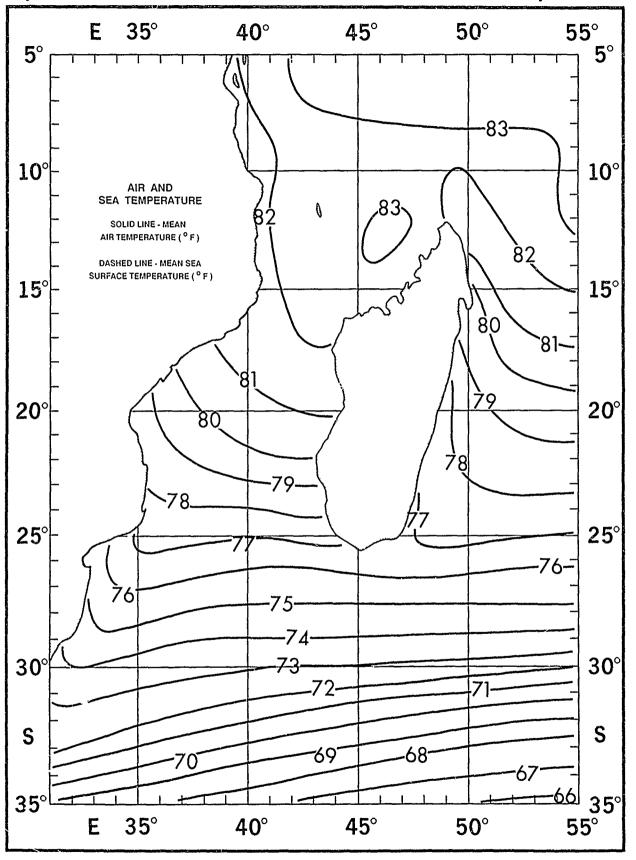




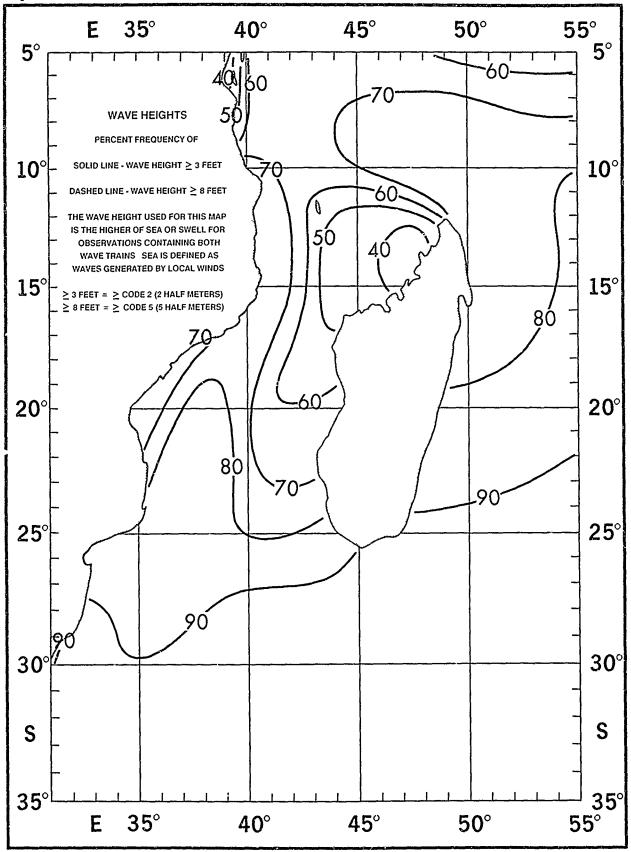


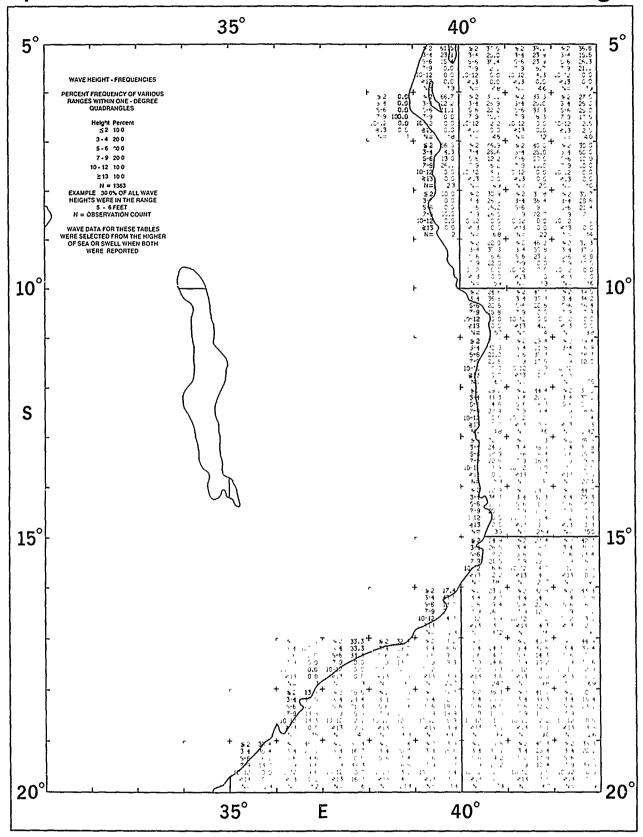


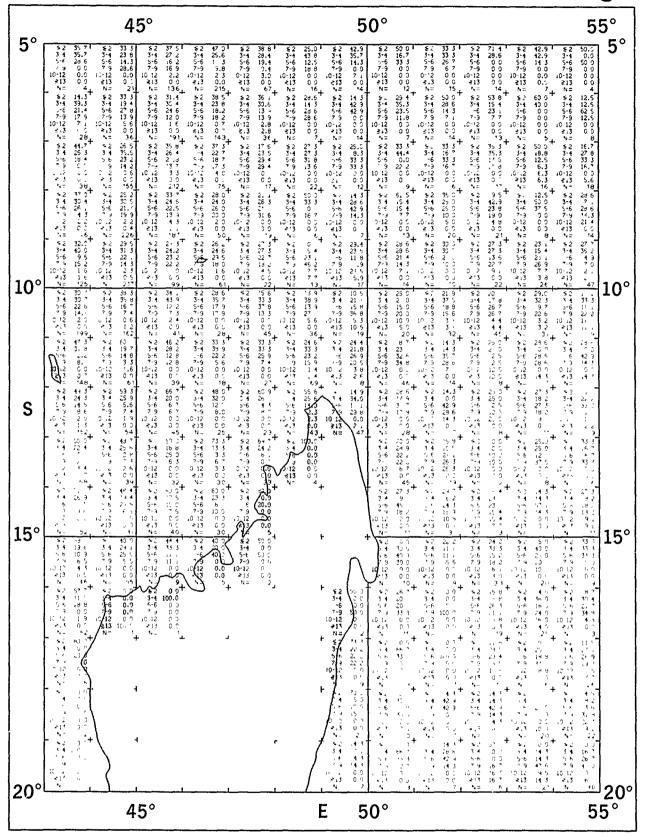
Air and Sea Temperature



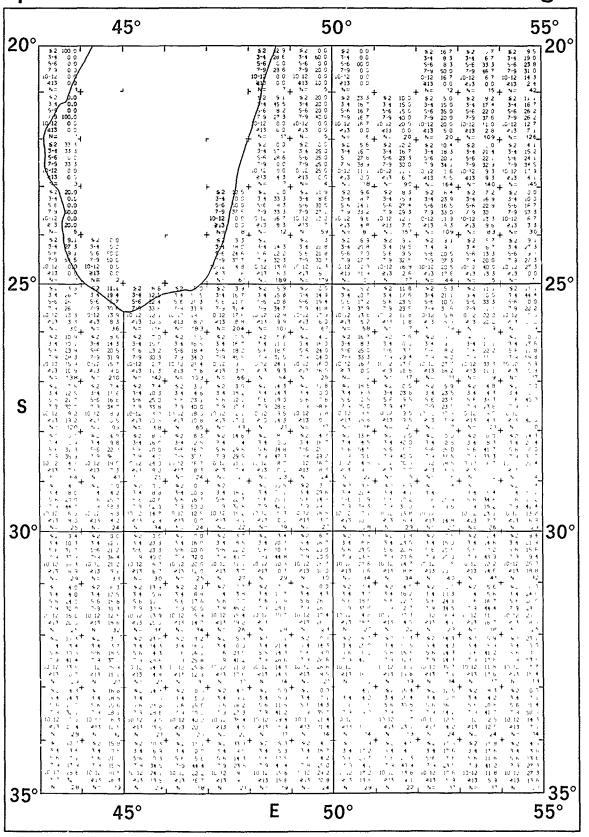


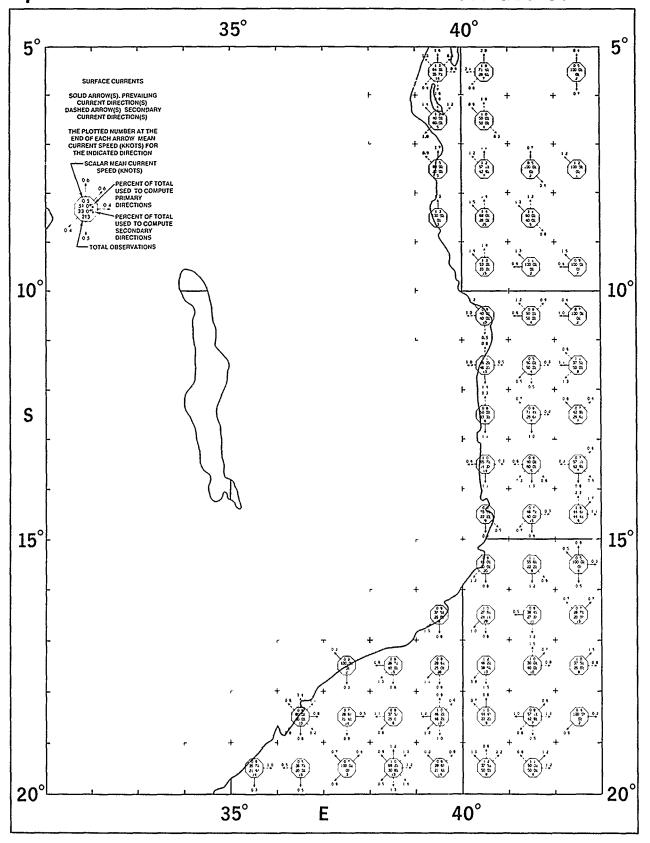


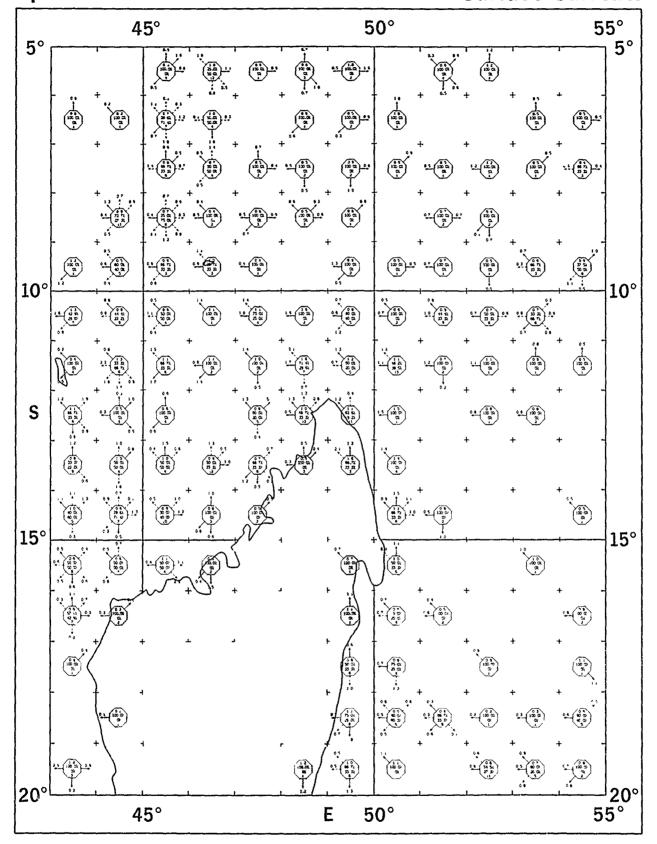


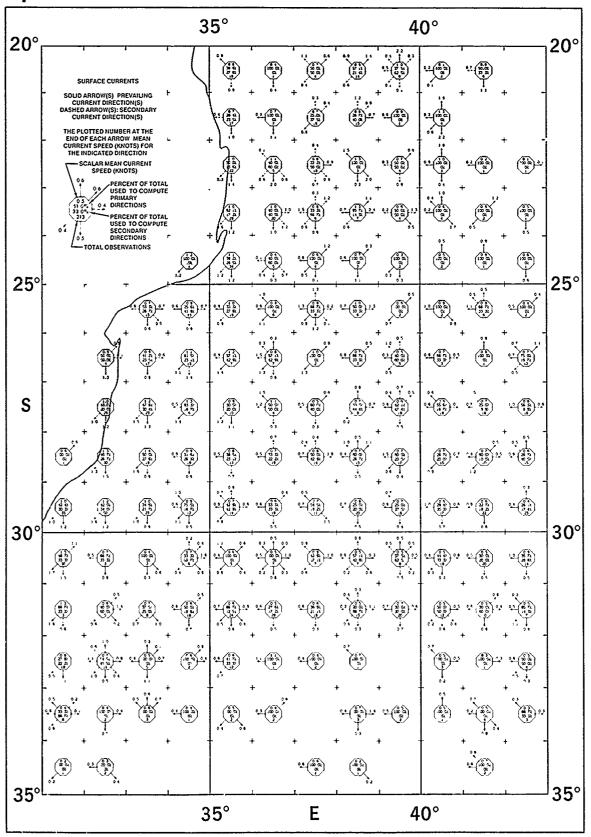


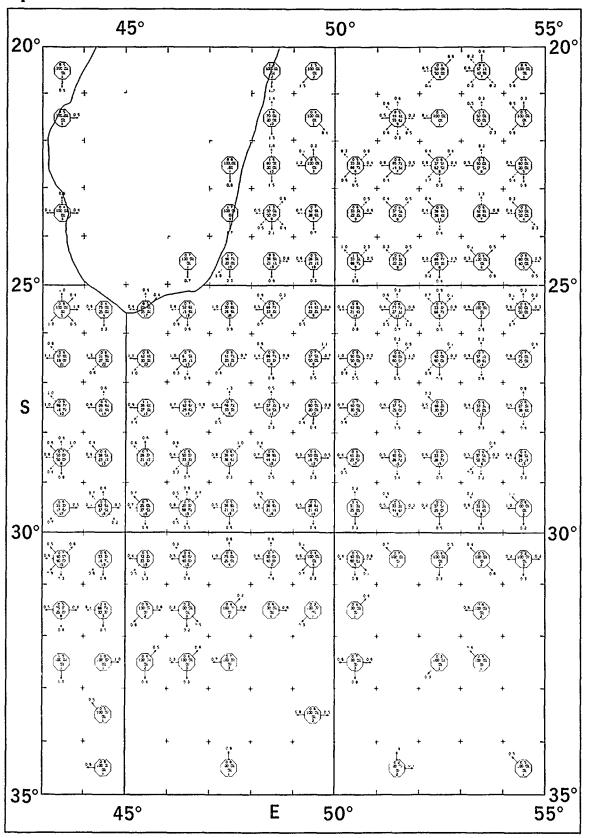
200		35°		40°	200
20°	WAVE HEIGHT - FREQUENCIES PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE - DEGREE QUADRANGLES Height Percent \$2 100 \$2 100 \$3.4 200 \$5.6 300 \$7.9 200	27 27 27 27 27 27 27 27 27 27 27 27 27 2	7 5-6 22 2 5-6 7,6 5-6 19.6 7.7 5-6 19.5 7-9 27.6 7-9 33 7-9 21.5 10.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12	7 3-4 56 9 3-4 19 6 3-4 17 6 5-6 29 3 5-6 17 6 5 7-9 13 6 7-9 7 5 7-9 19 6 5 6 10 12 0 0 10 12 6 5 6 3 5 6 10 12 0 0 10 12 6 5 6 10 12 0 10 12 6 10 12	3-4 50 0 7-9 16 7 10-12 0 0 413 0 0 4-5 2 50 0 5-6 0 0 7-9 0 0 413 0 0 N= 4 52 0 0 7-9
25°	10-12 100 213 100 N = 1363 EXAMPLE 300% OF ALL WAVE HEIGHTS WERE IN THE RANGE 5 - 6 FEET N = OBSERVATION COUNT WAVE DATA FOR THESE TABLES WERE SELECTED FROM THE HIGHER OF SEA OR SWELL WHEN BOTH WERE REPORTED	10-12 72 81 73 74 75 75 75 75 75 75 75 75 75 75 75 75 75	8 16-12 13 4 0 12 30 0 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 10 2 78 0 2 38 00 12 00 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10 12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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	7.9 88 6 79 3.8 9 1012 29 0.12 2 10 1012 11 10	8 3 4 5 6 13 6 14 6 14 6 14 6 14 6 14 6 14 6 14	x 10 2 1 4 10 17 3 56 10 12 1 4 21 3 4 4 21 4 4 4 3 4 3 3 5 5 4 4 4 5 7 3 5 6 10 12 1 3 4 2 7 5 4 5 2 10 3 4 5 6 1 4 4 5 7 3 5 7 5 7 6 21 5 6 14 5 6 14 14 5 6 14 4 5 6 20 7 7 6 21 5 6 14 5 6 14 14 5 6 17 5 7 3 27 6 7 7 6 21 5 6 14 5 6 17 7 2 2 17 7 10 12 13 7 7 7 16 17 7 2 7 2 7 7 8 4 3 4 3 3 12 8 10 16 5 7 7 7 6 7 7 8 6 7 7 9 3 14 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	4 0.12 13 5 112 37 0.1 1 - 13 94 41 115 43 1 4 4 No. 1 12 13 No. 3 - 4 12 14 15 13 No. 3 - 5 12 15 15 17 34 3 - 5 12 15 15 17 34 3 - 5 12 15 15 17 18 18 18 18 18 18 18 18 18 18 18 18 18	10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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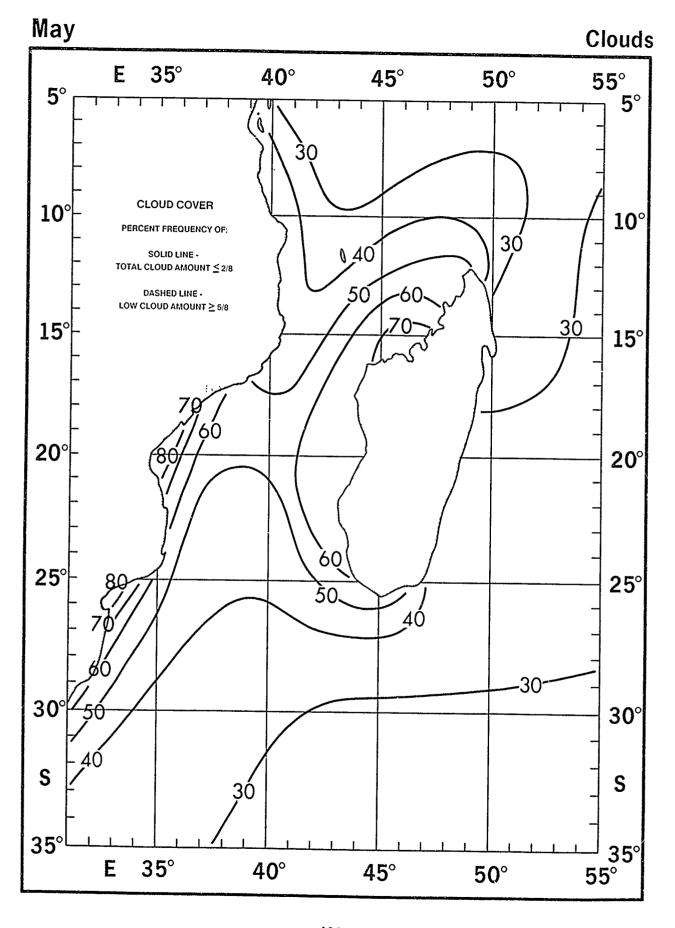






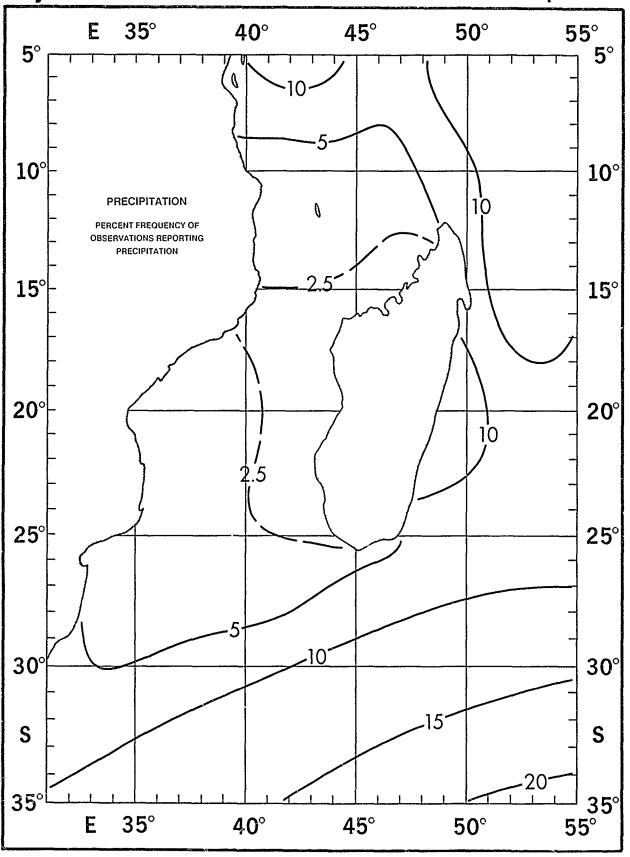




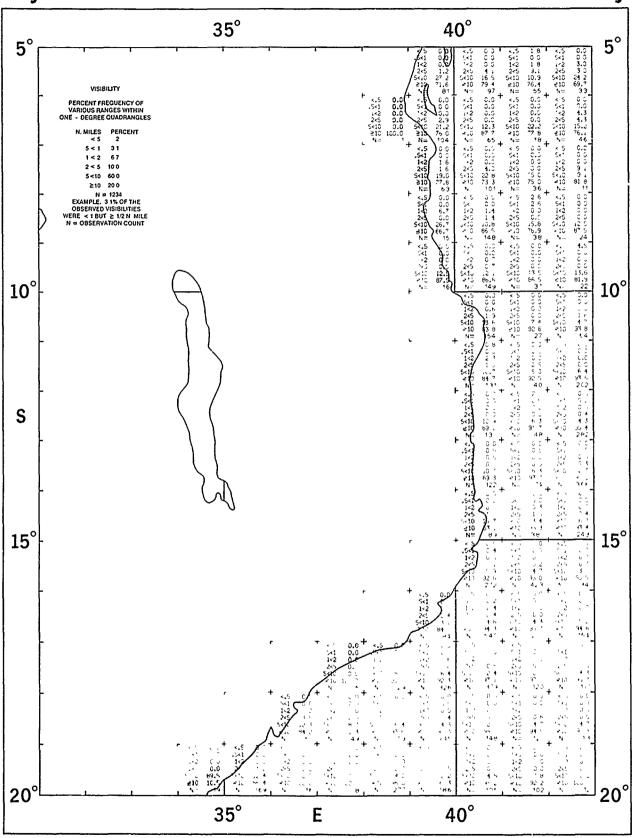


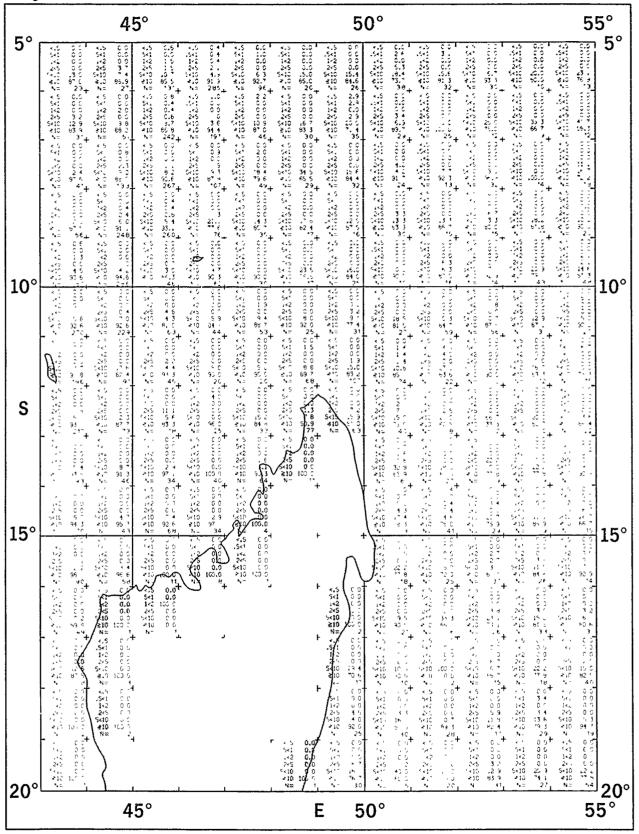


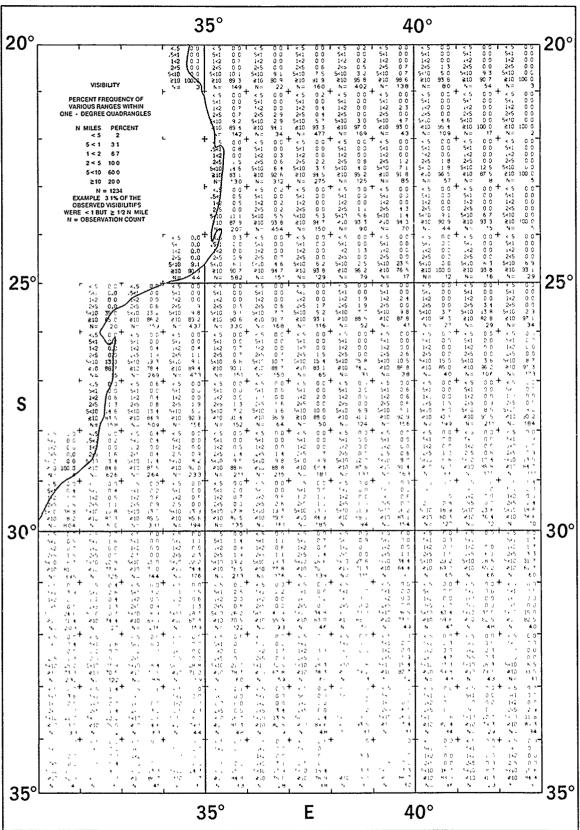
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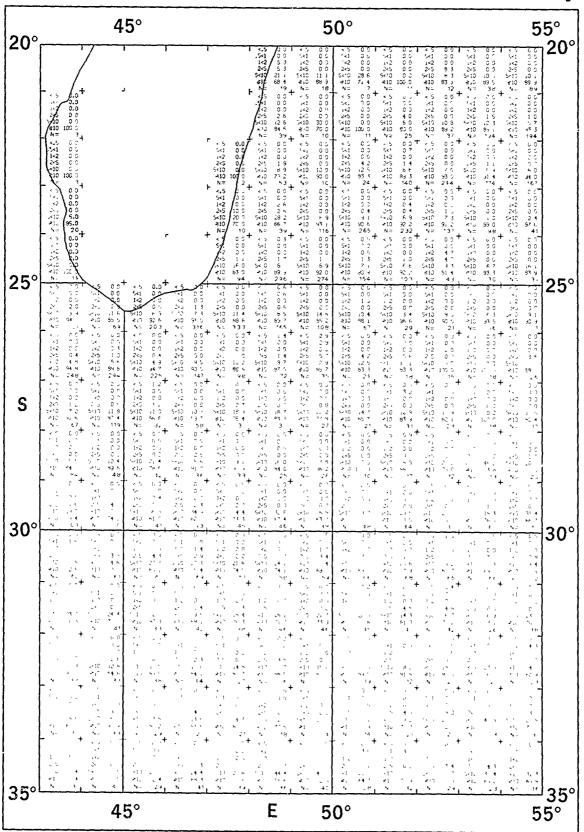






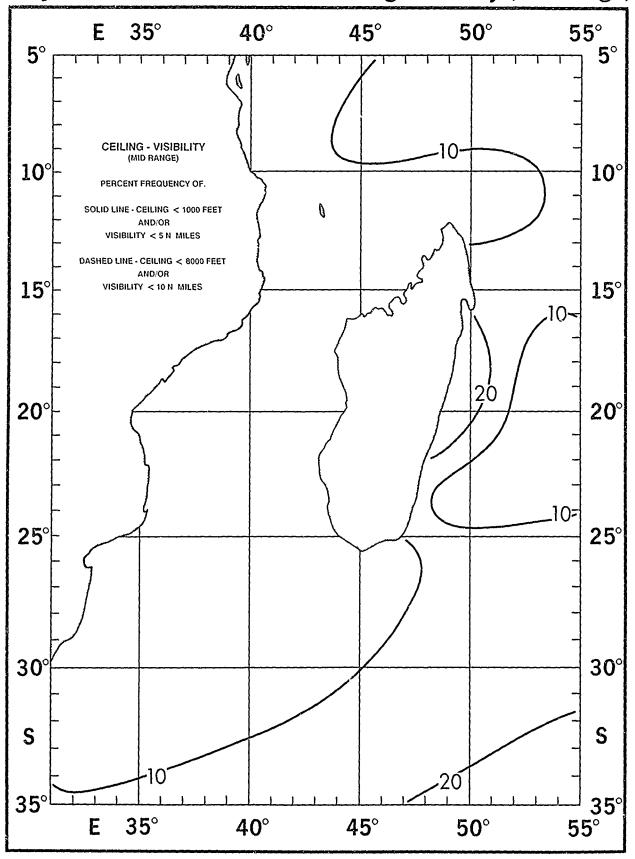


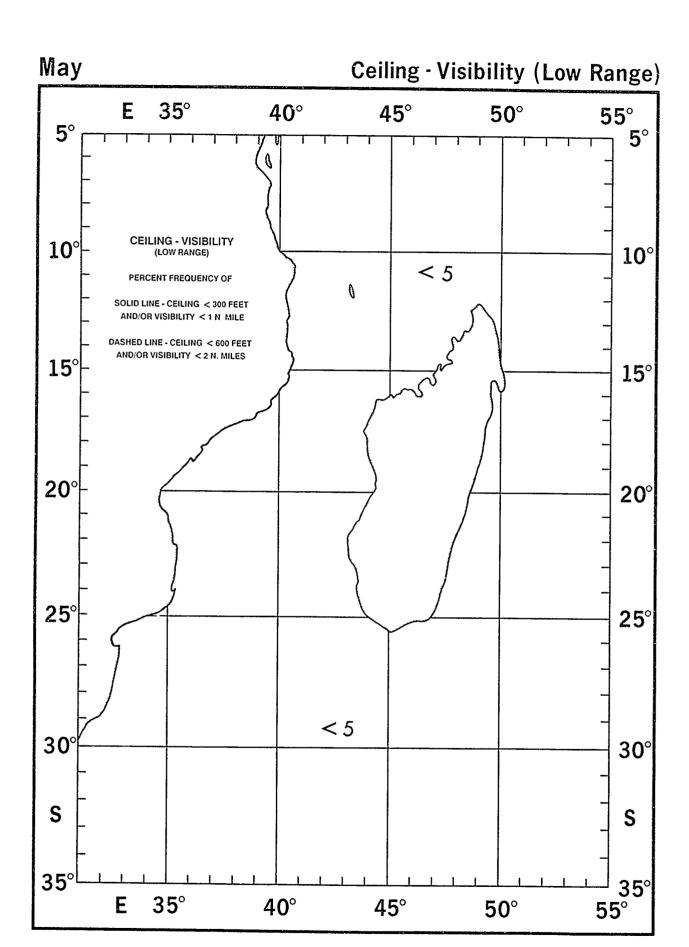


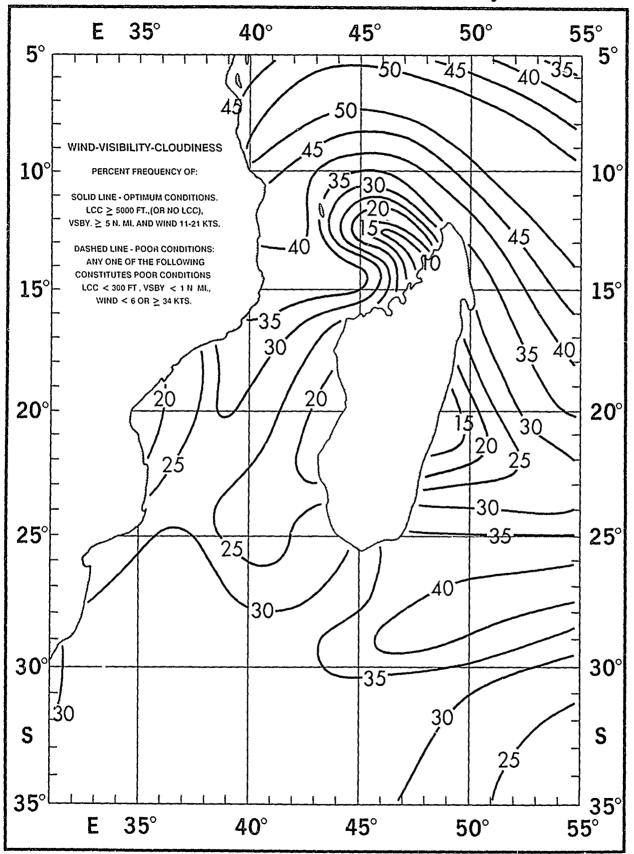


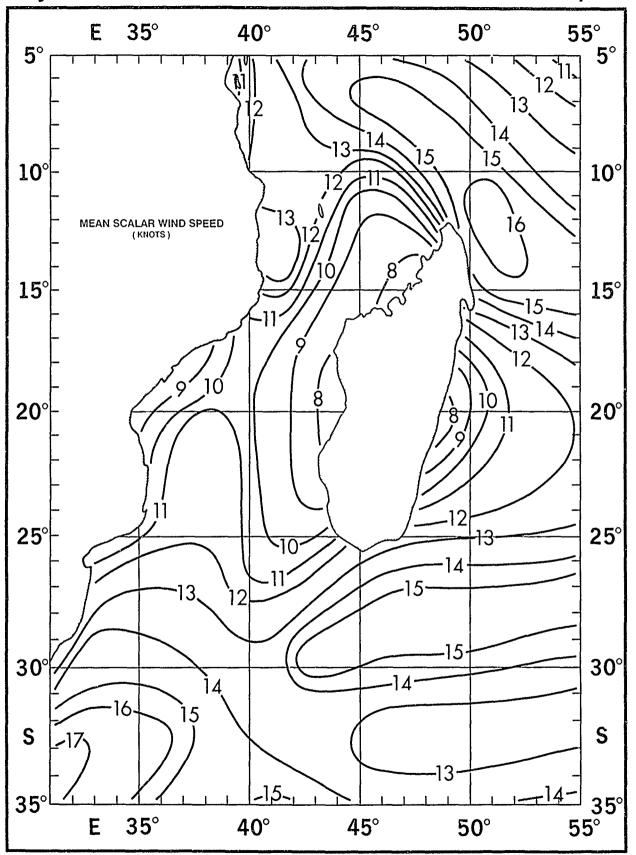


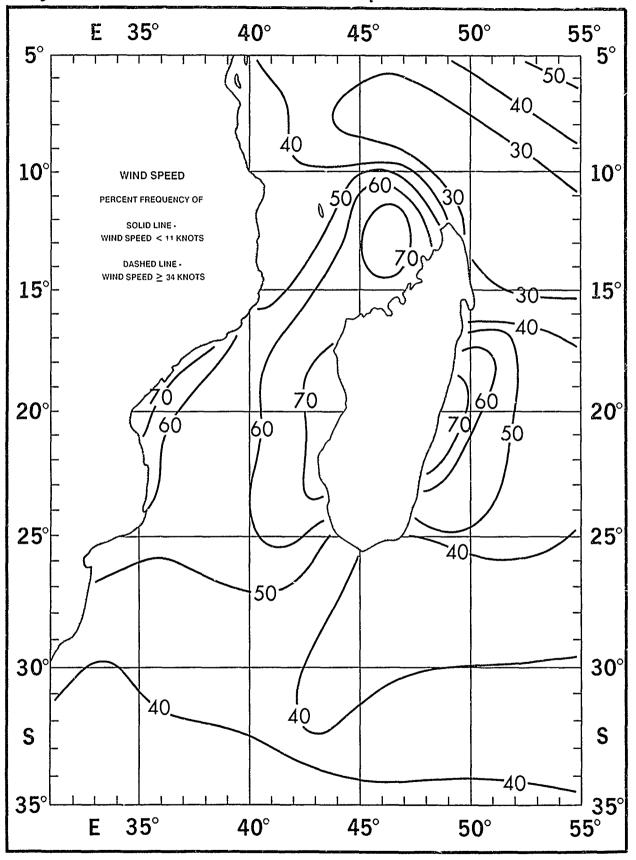
Ceiling - Visibility (Mid Range)

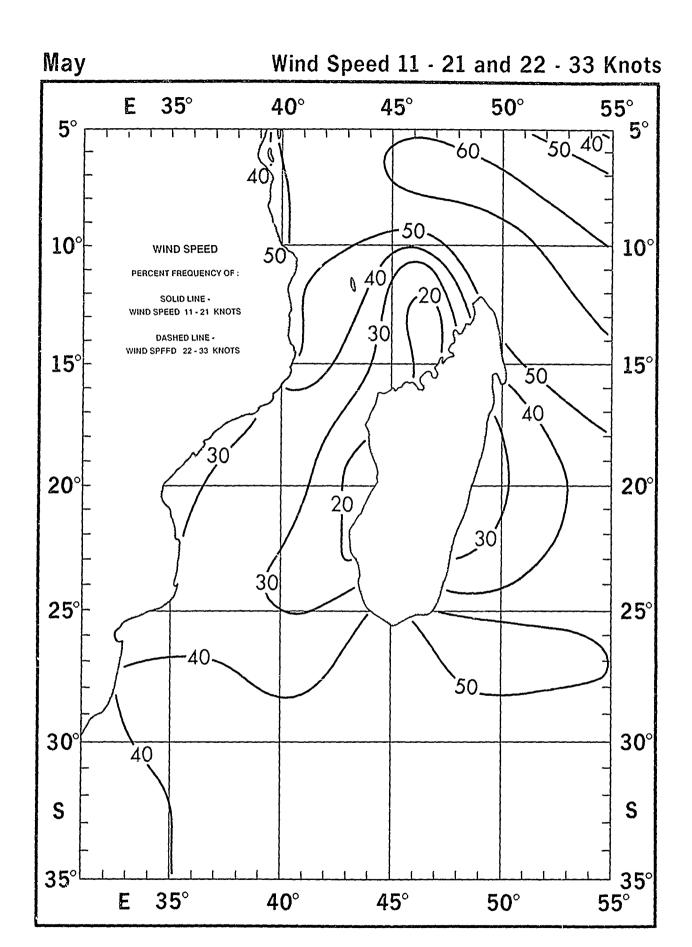


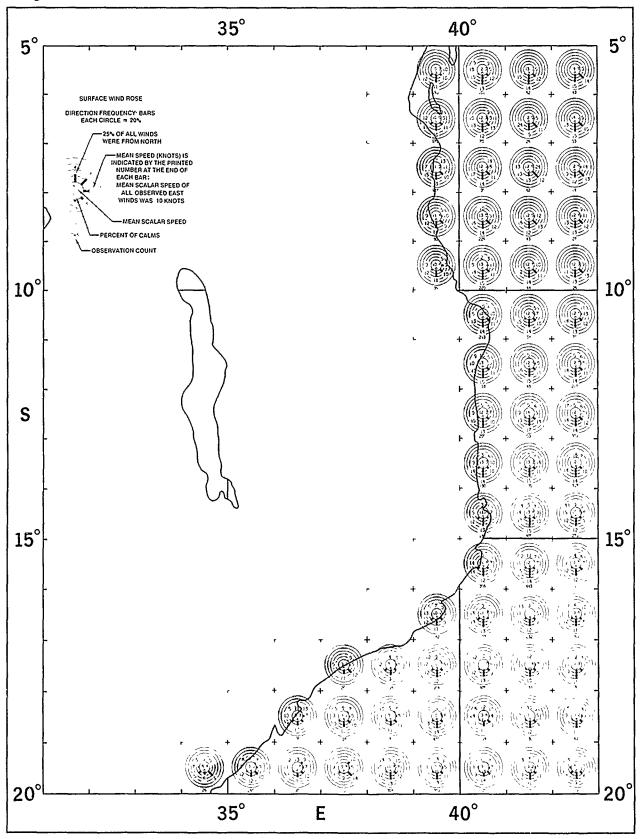


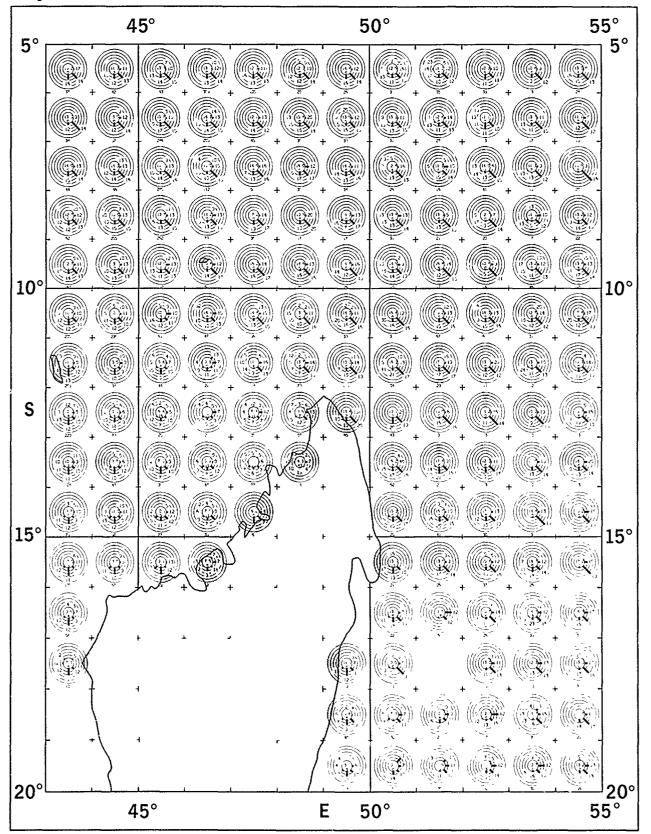


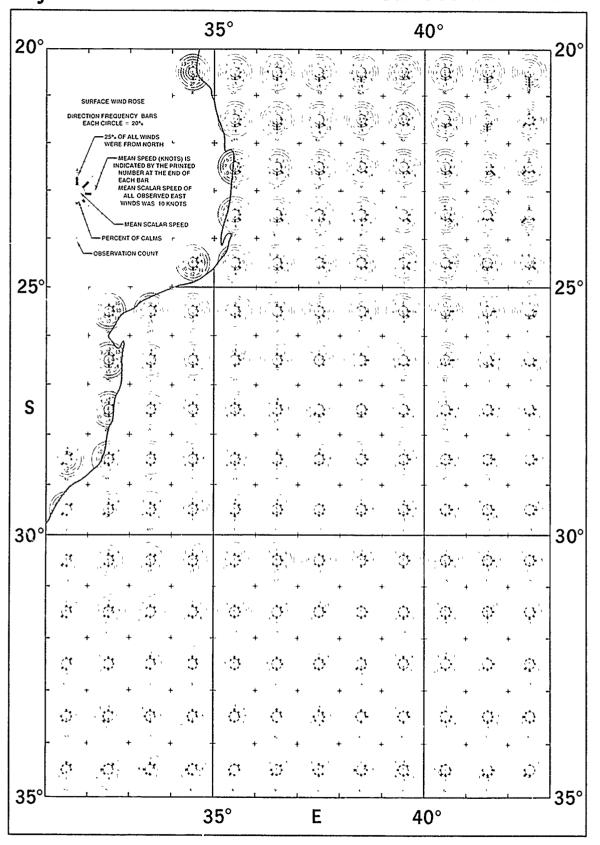




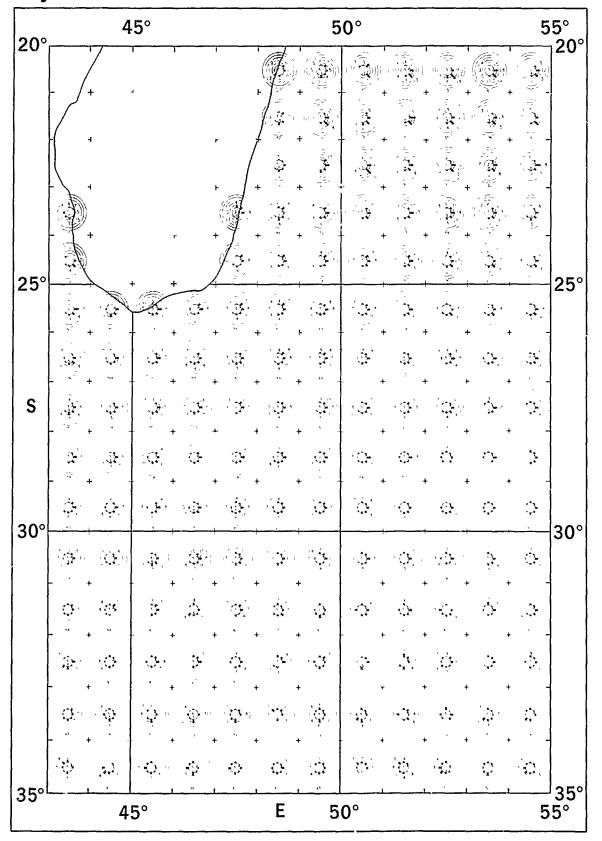






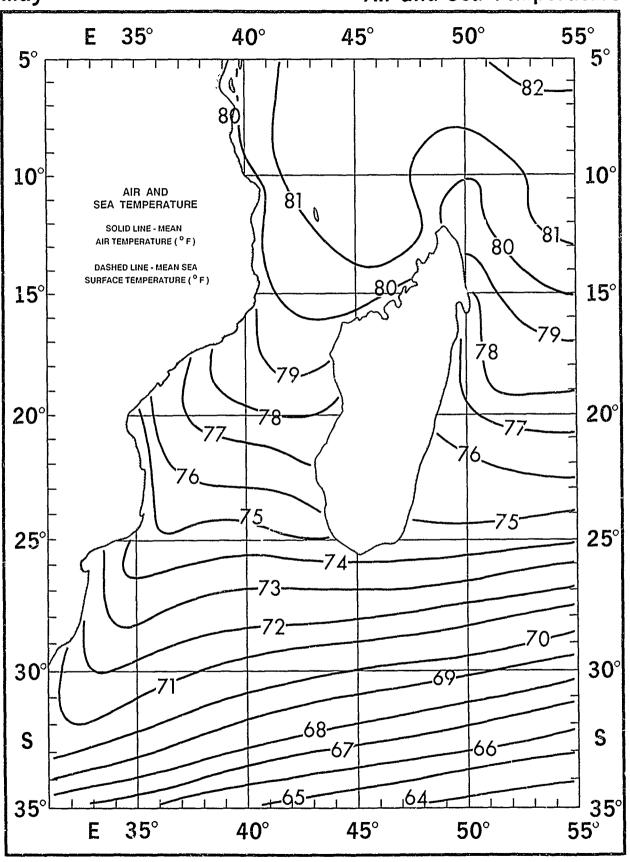




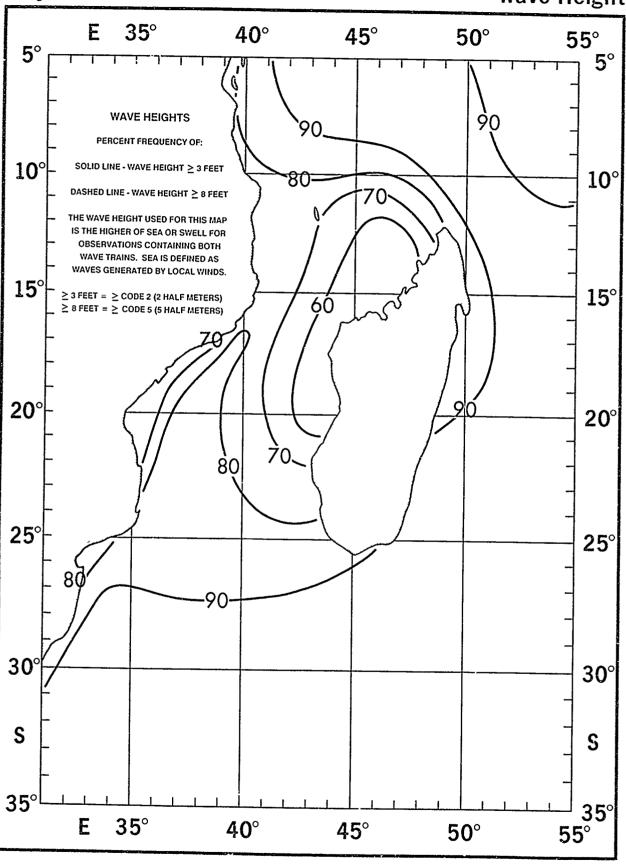




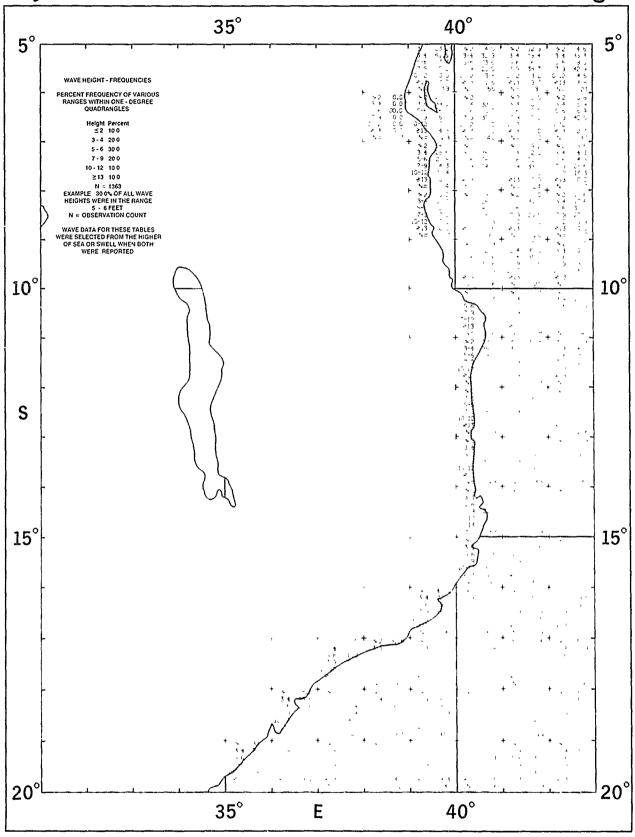
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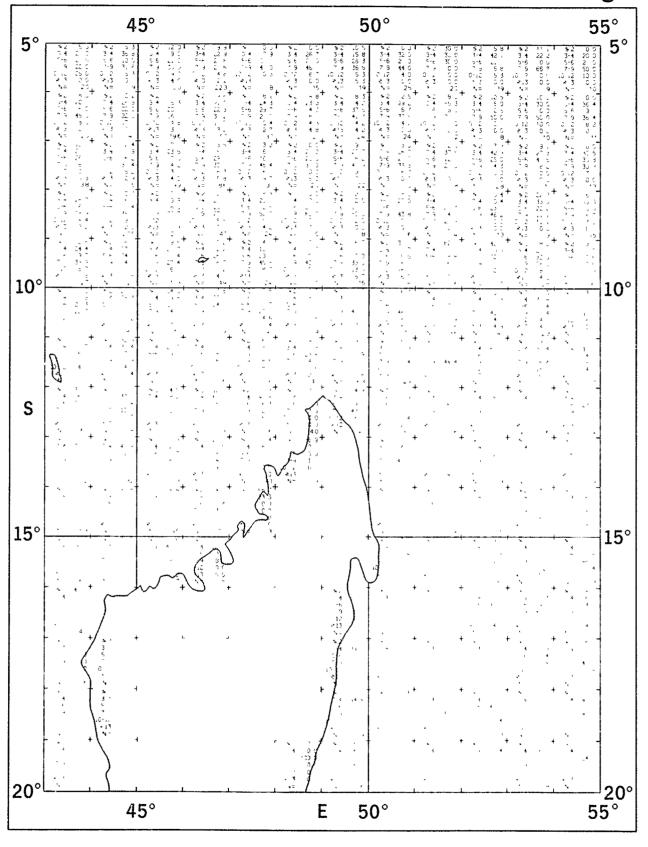


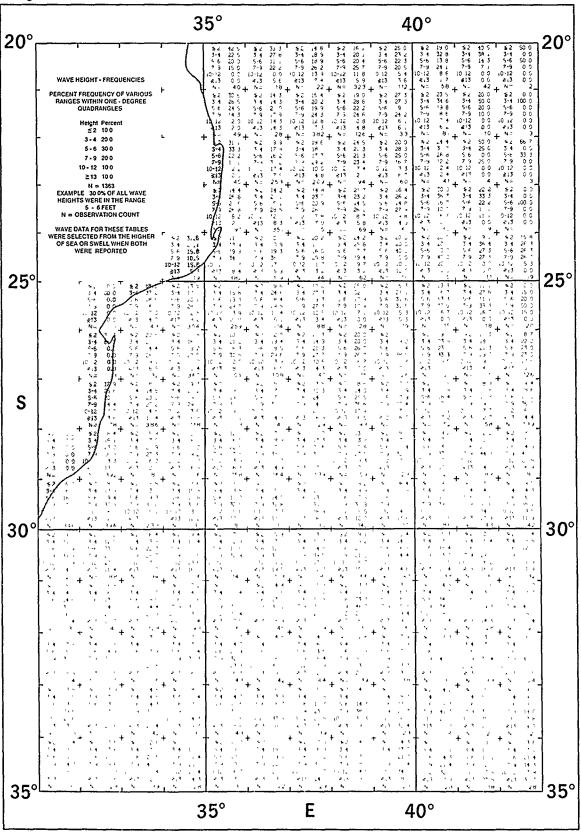


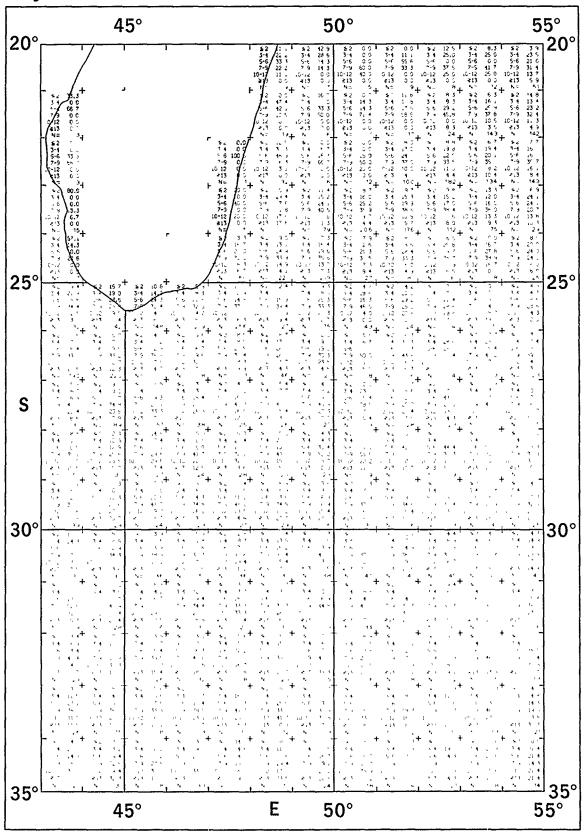




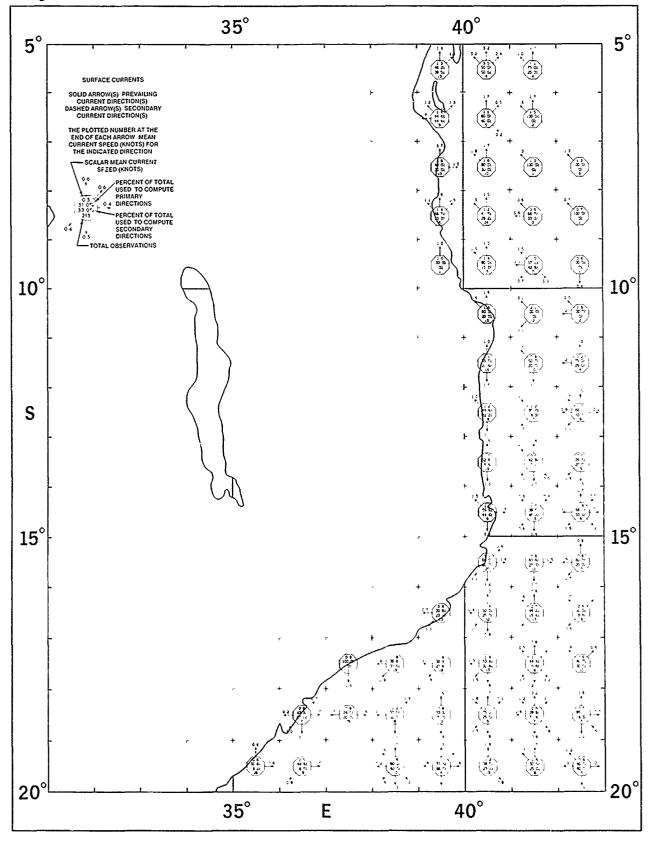


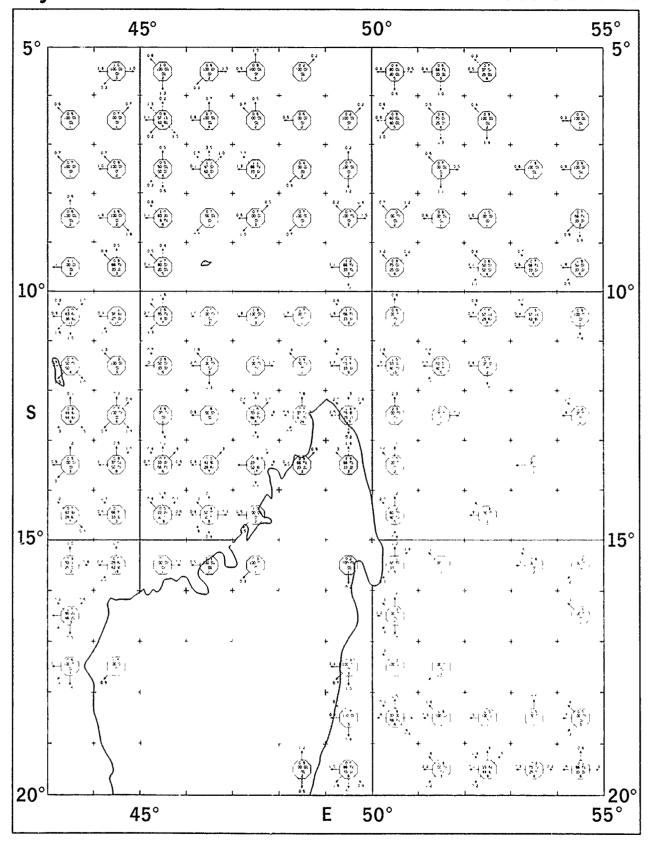


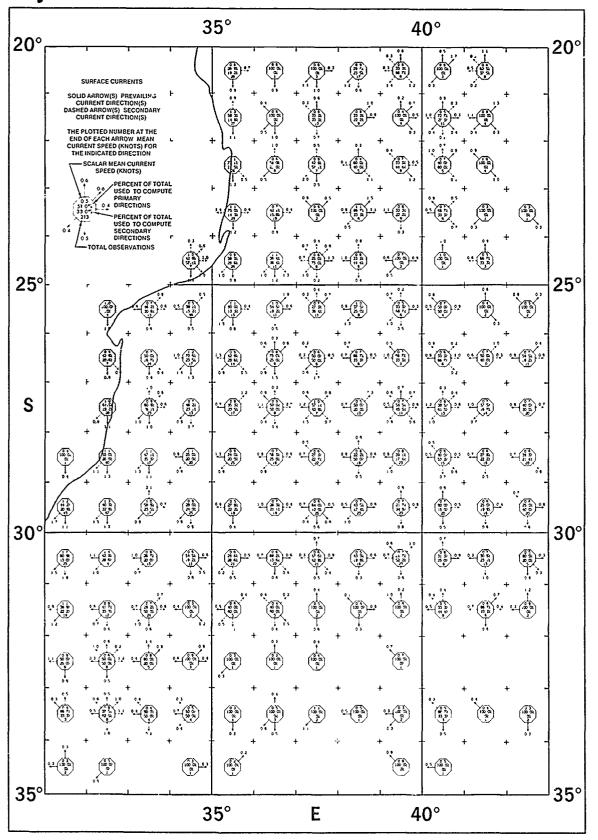


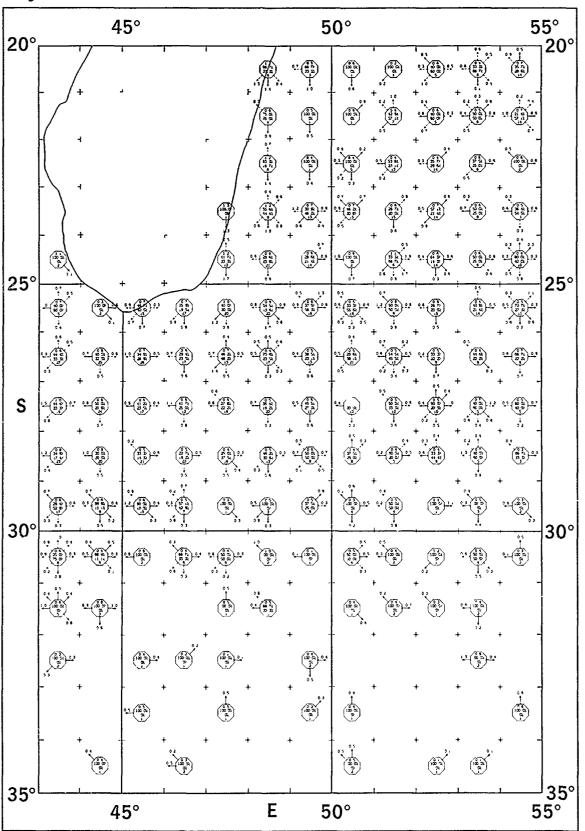




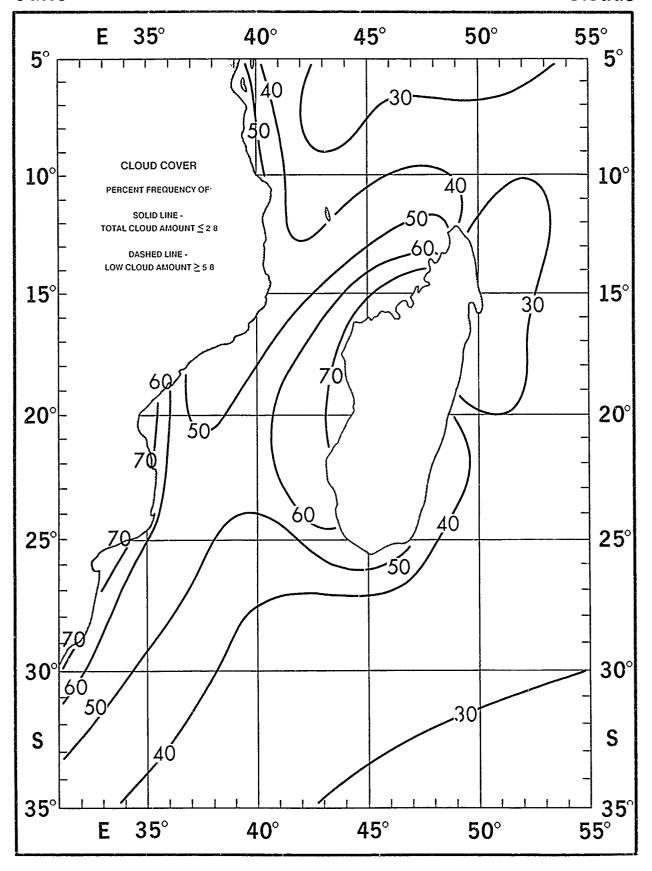


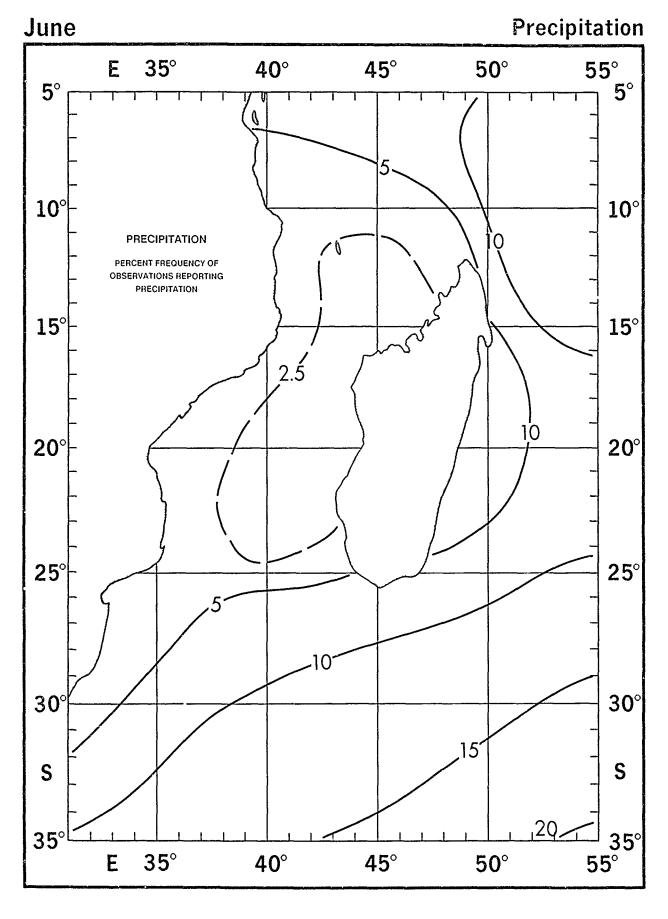


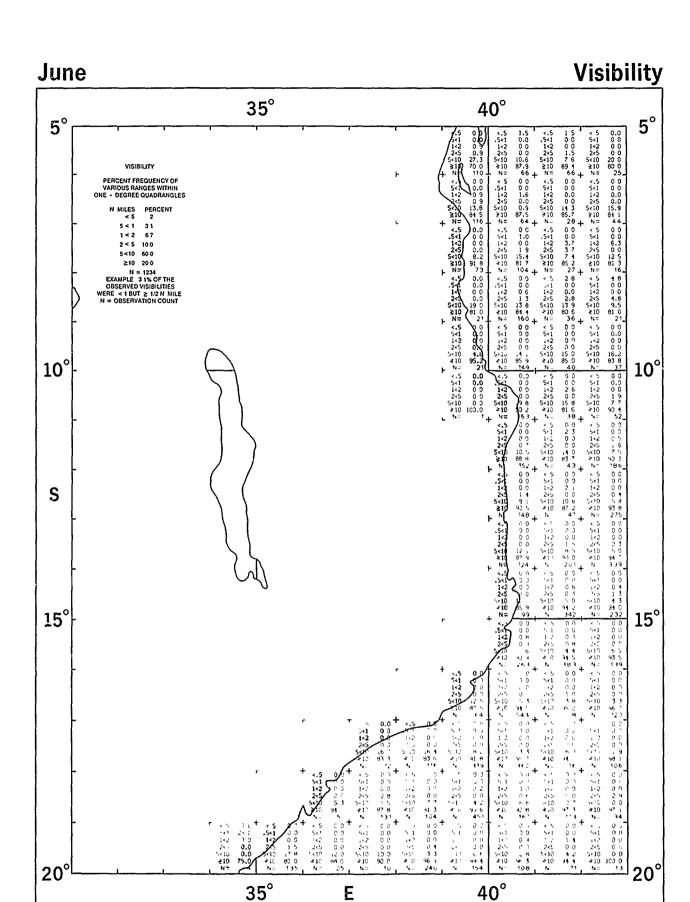


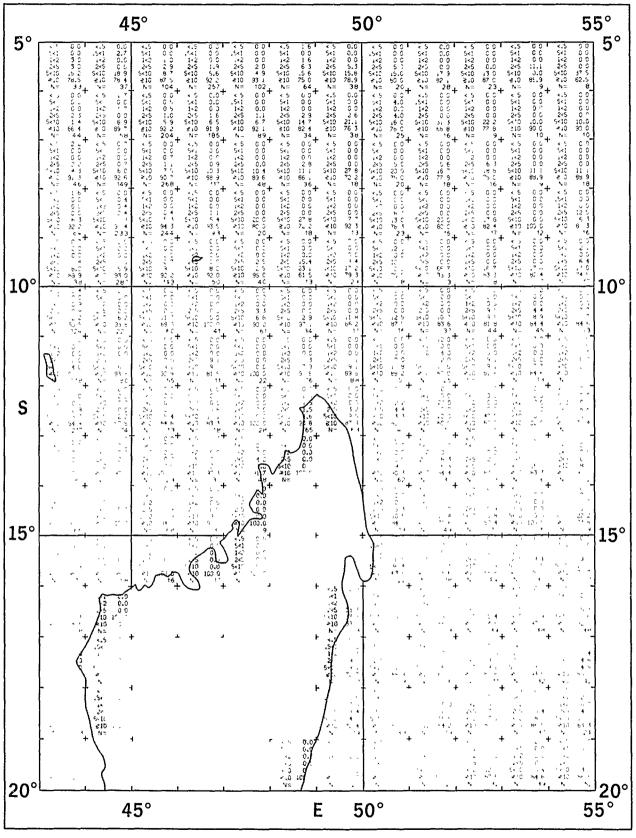


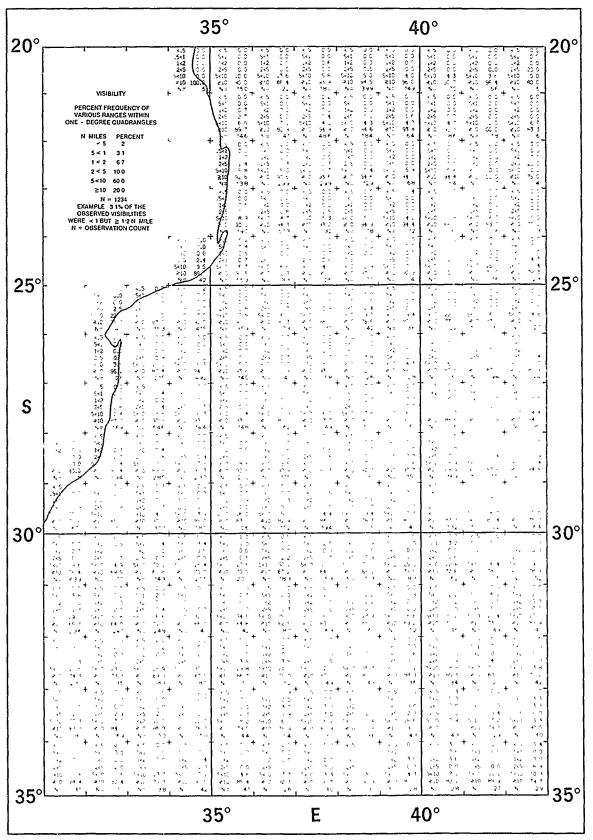
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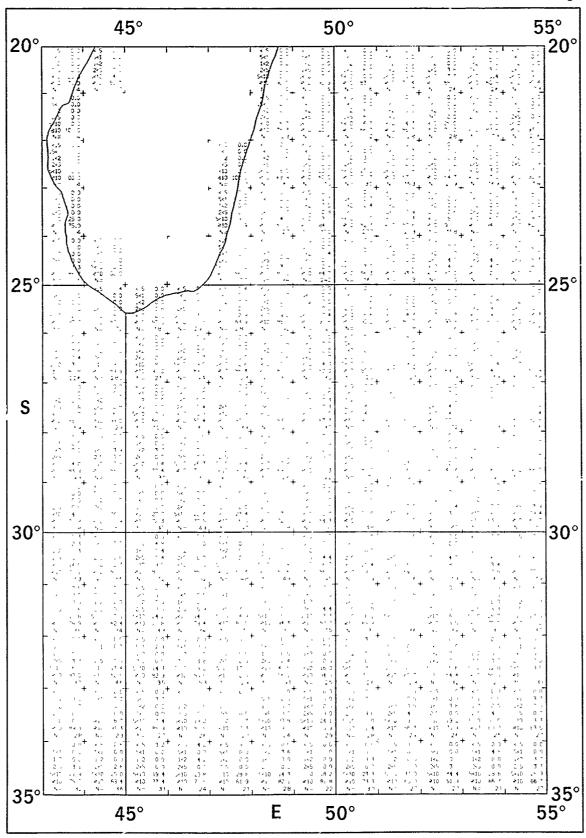






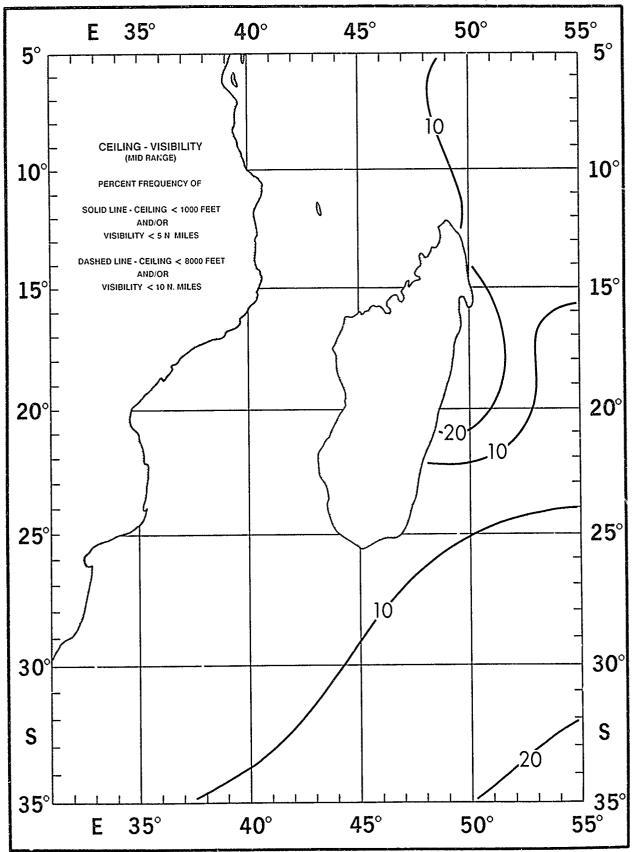


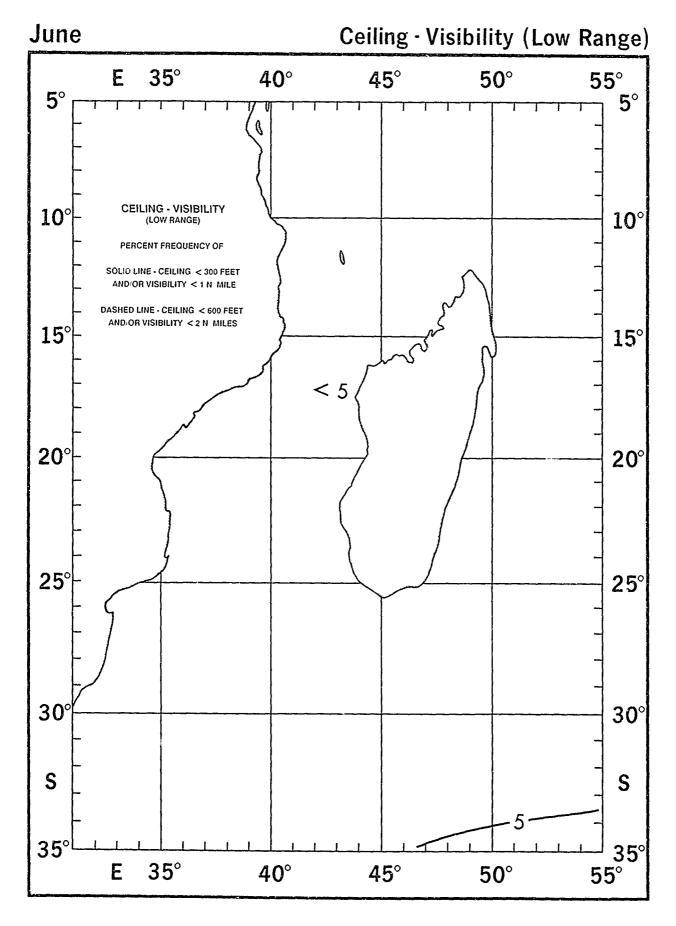


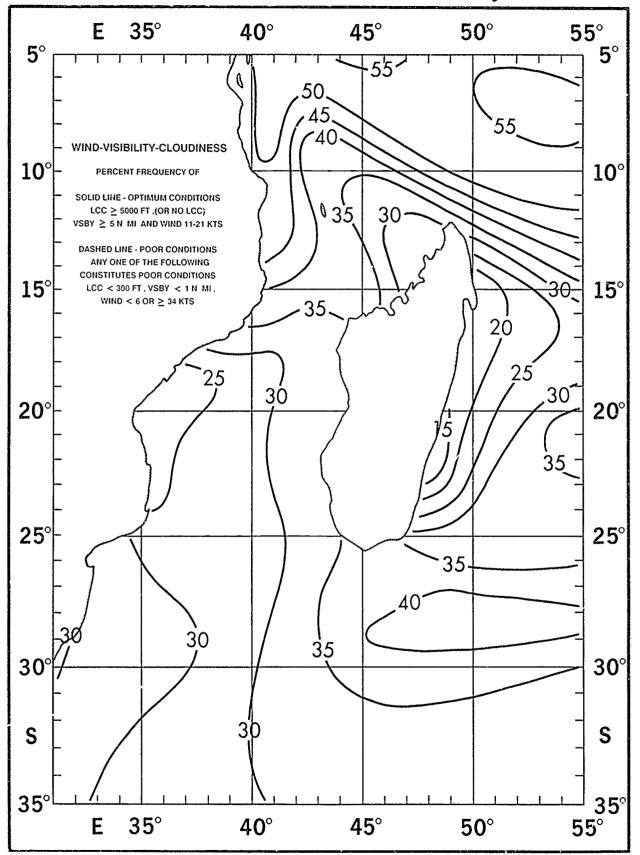




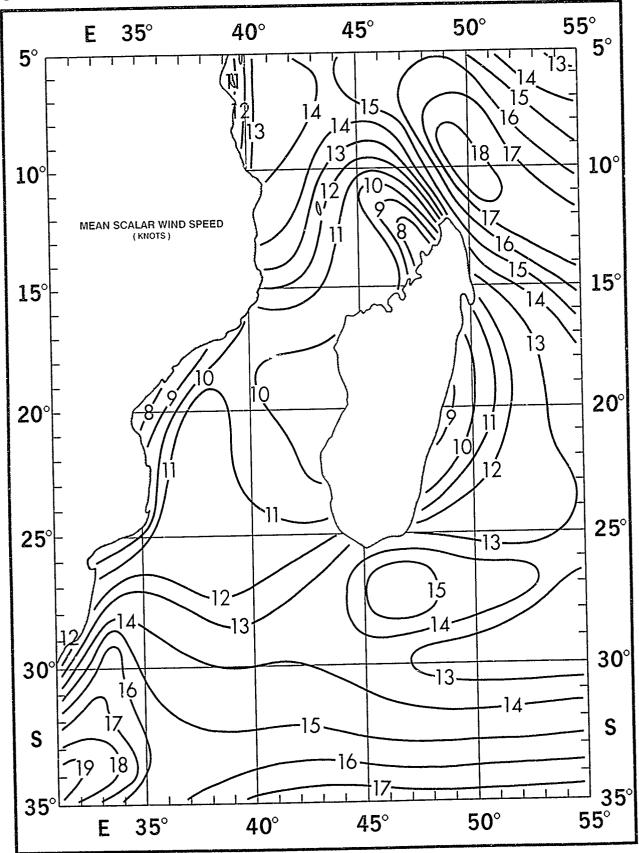
Ceiling - Visibility (Mid Range)





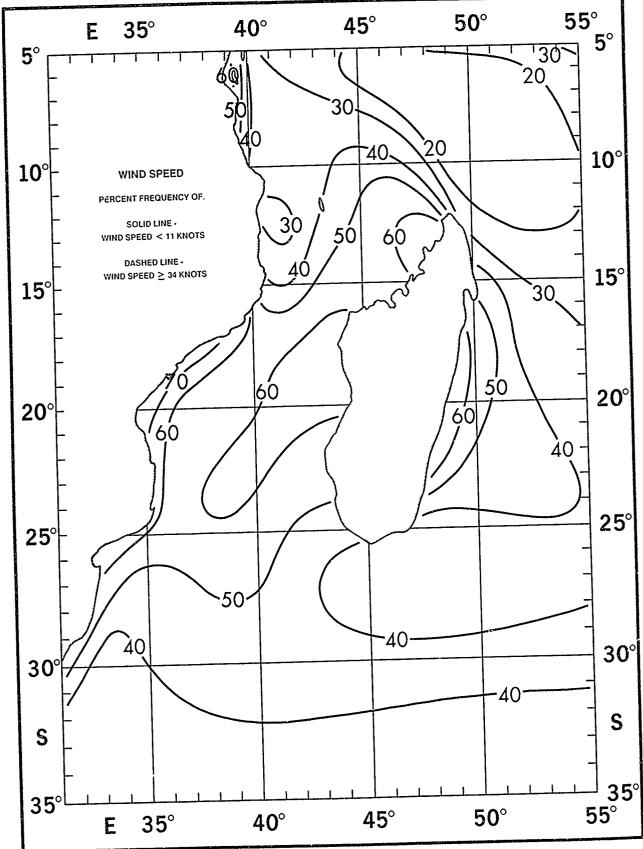


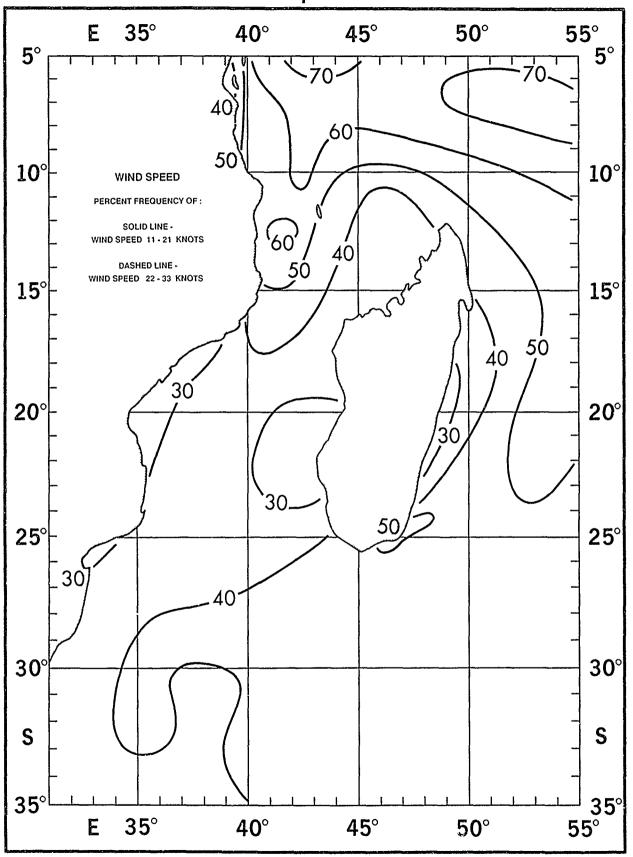
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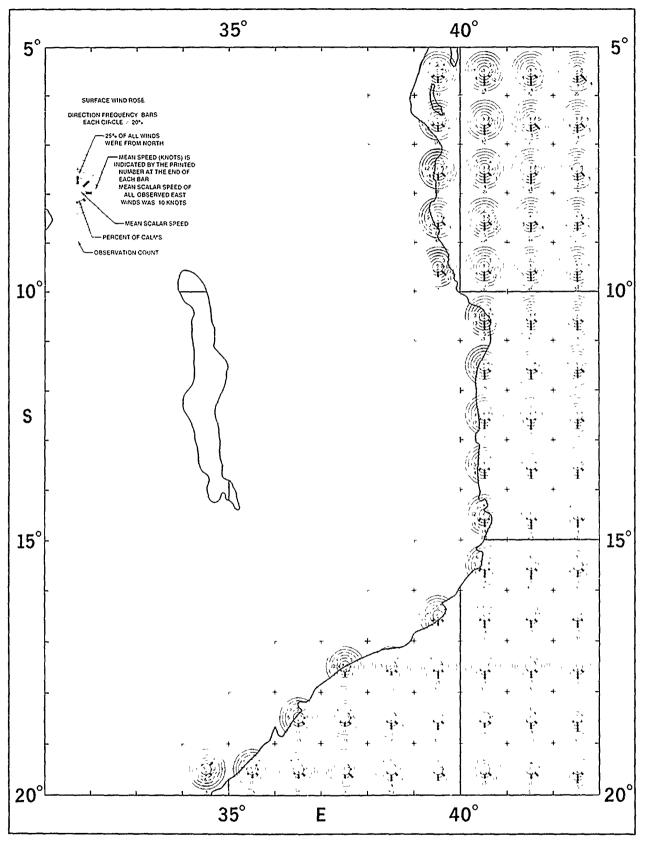


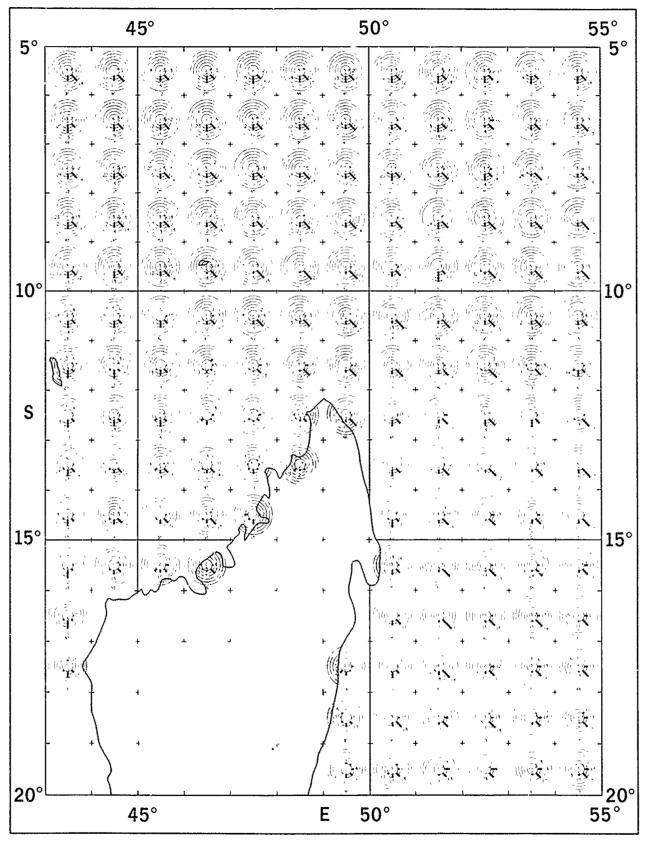


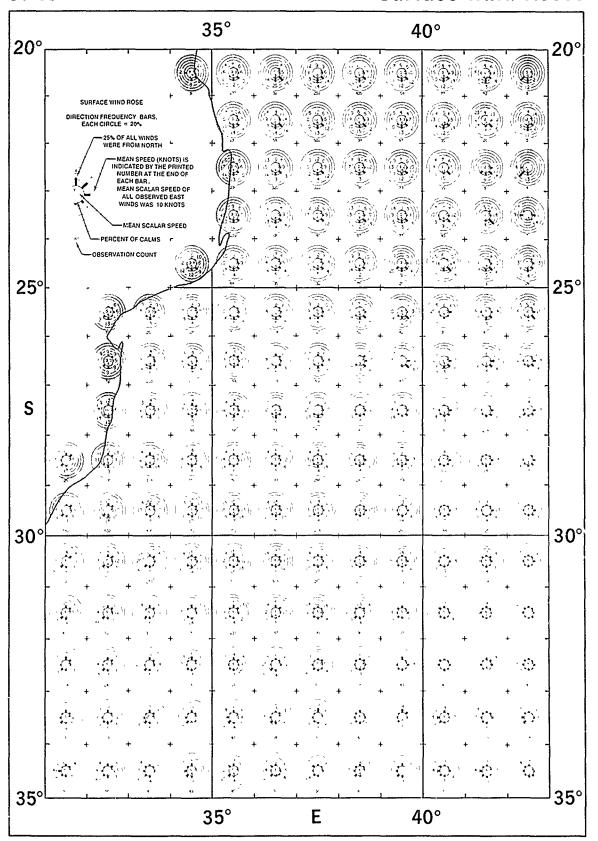
Wind Speed <11 and ≥34 Knots

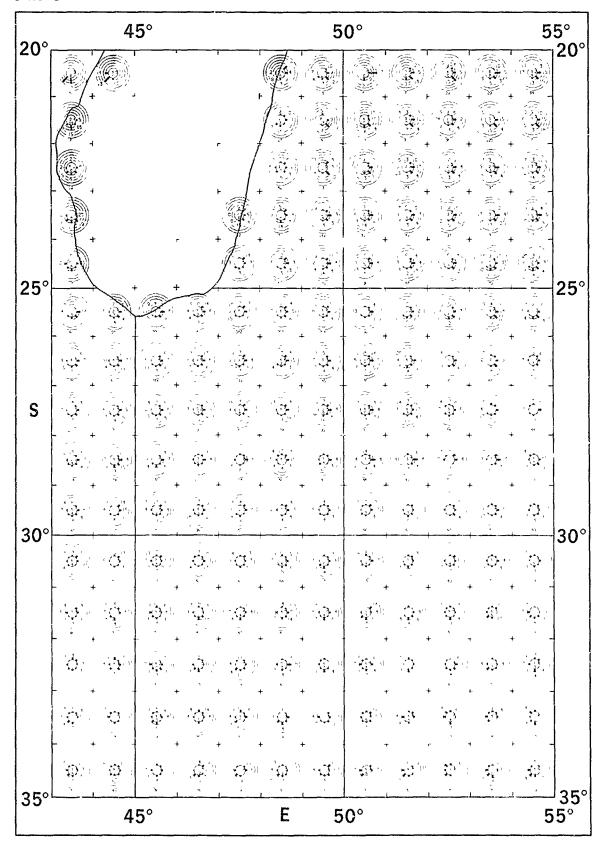




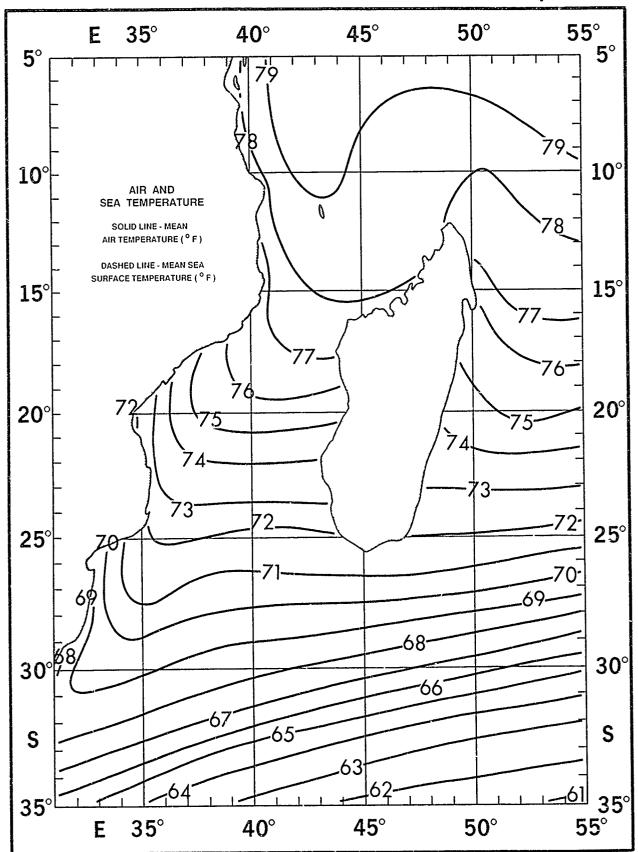




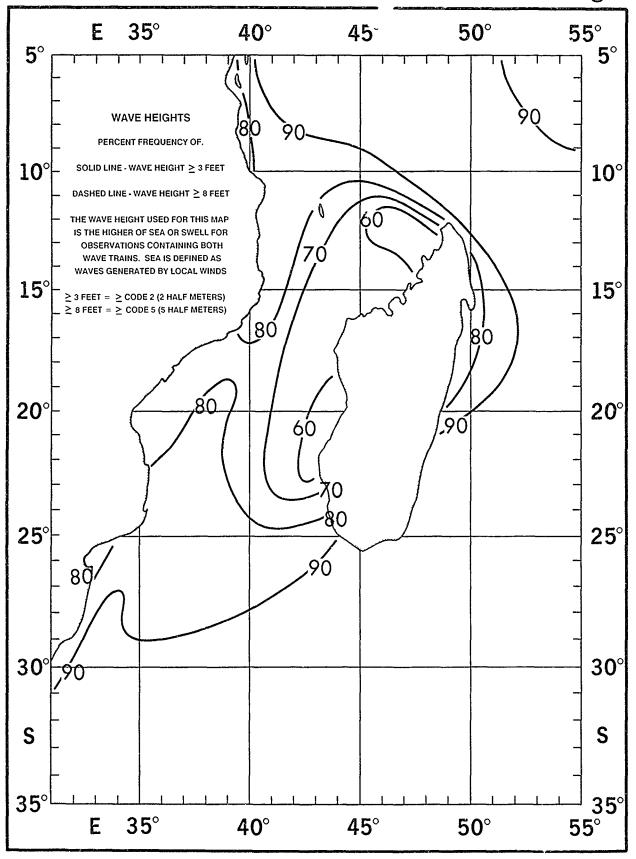


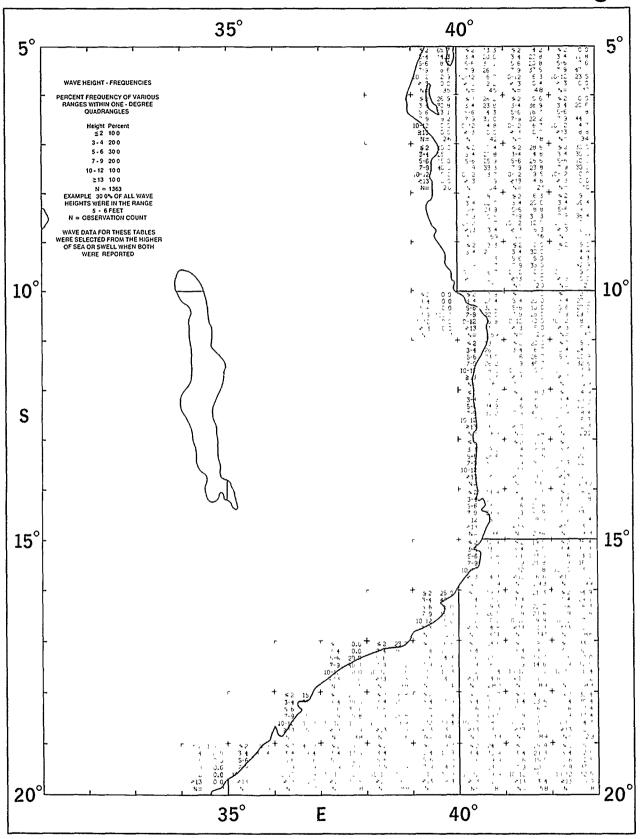


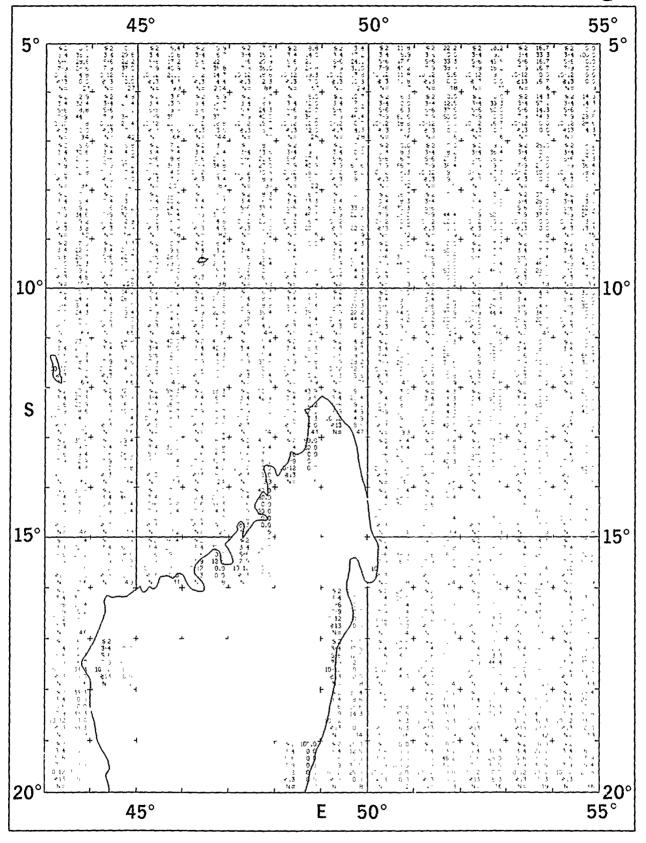
Air and Sea Temperature

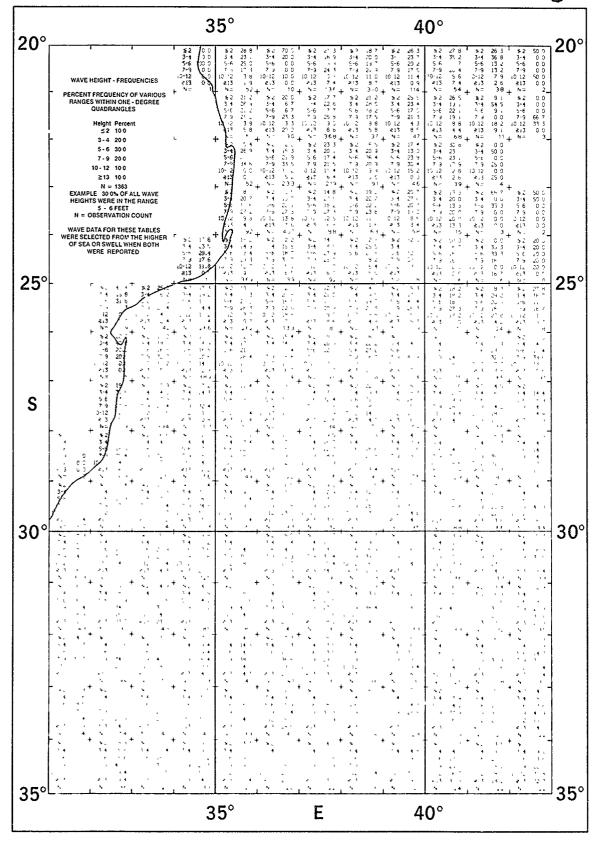


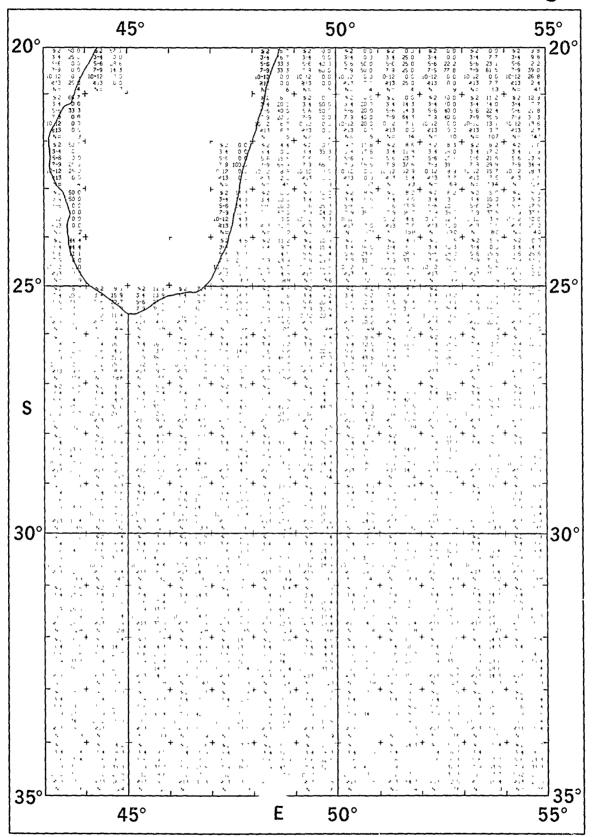


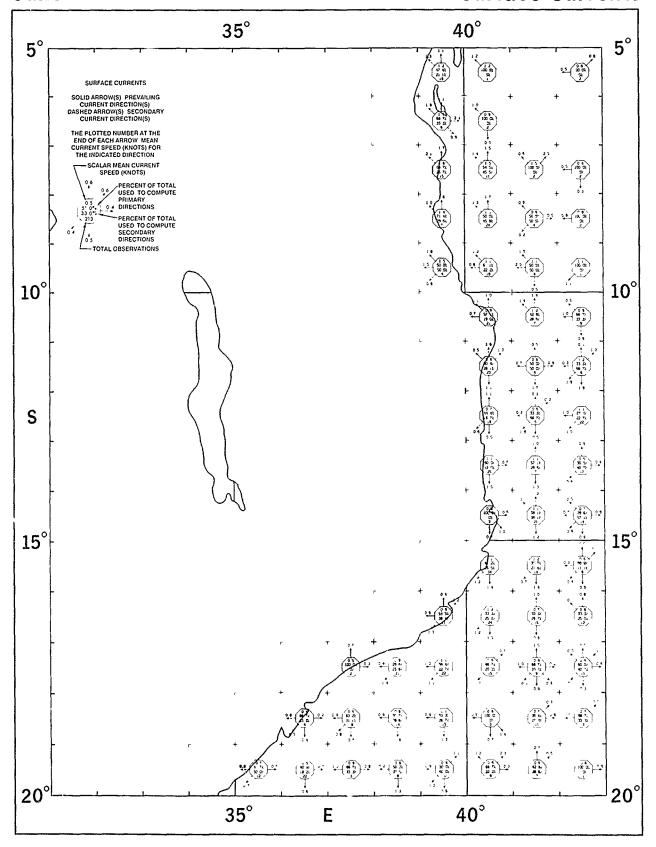


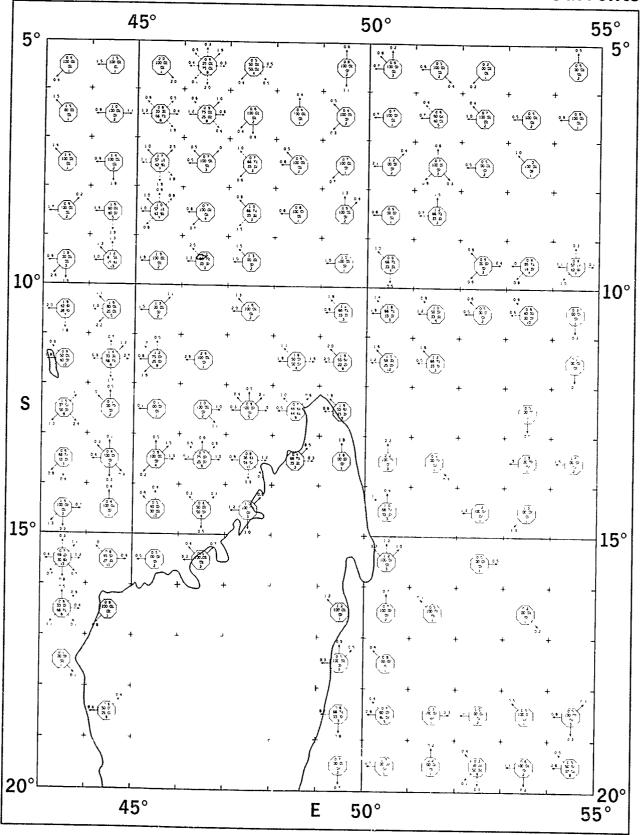


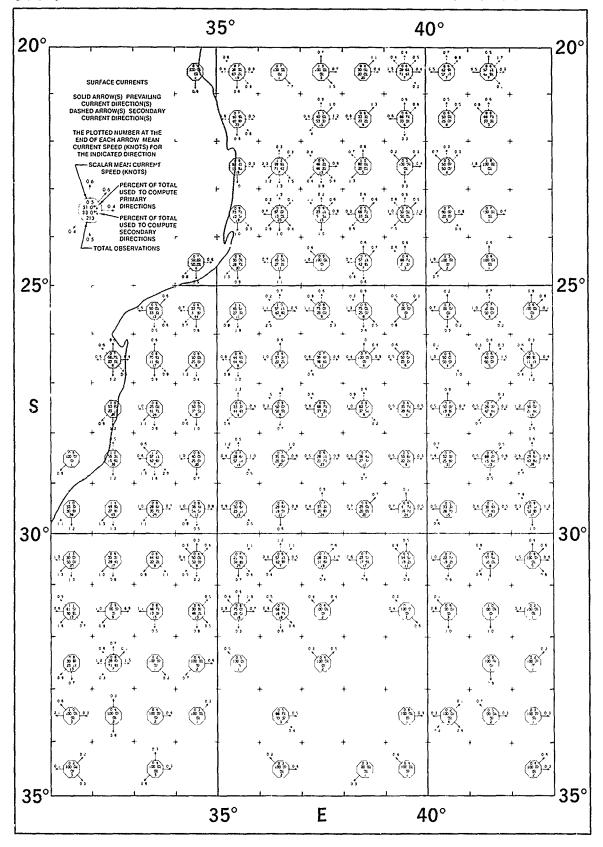


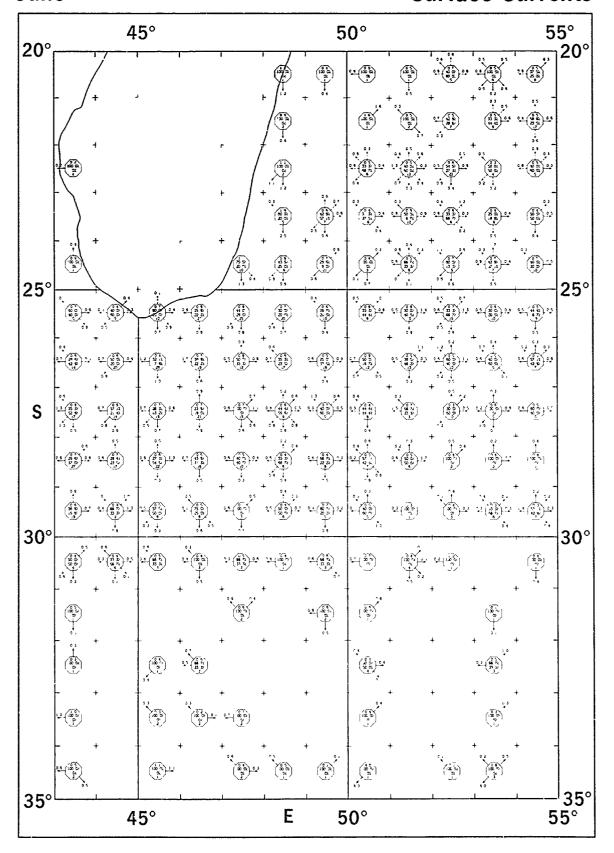


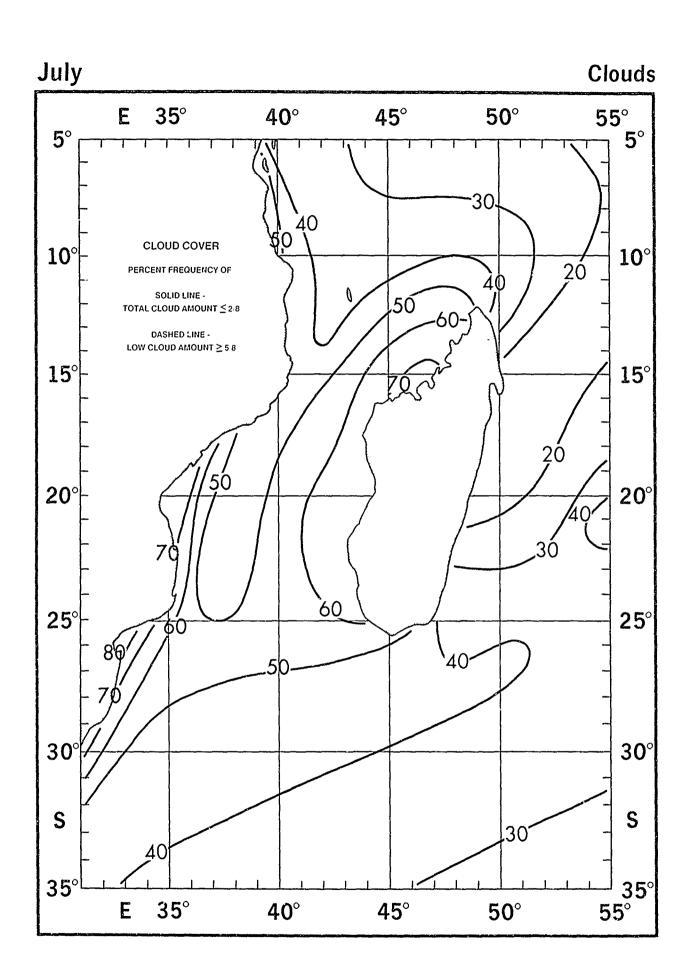


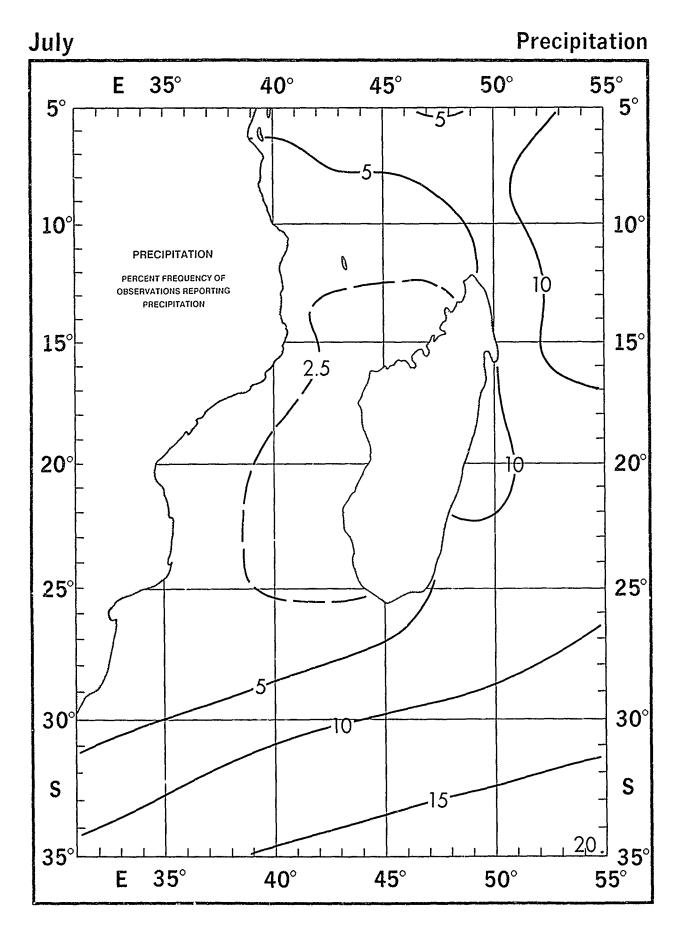




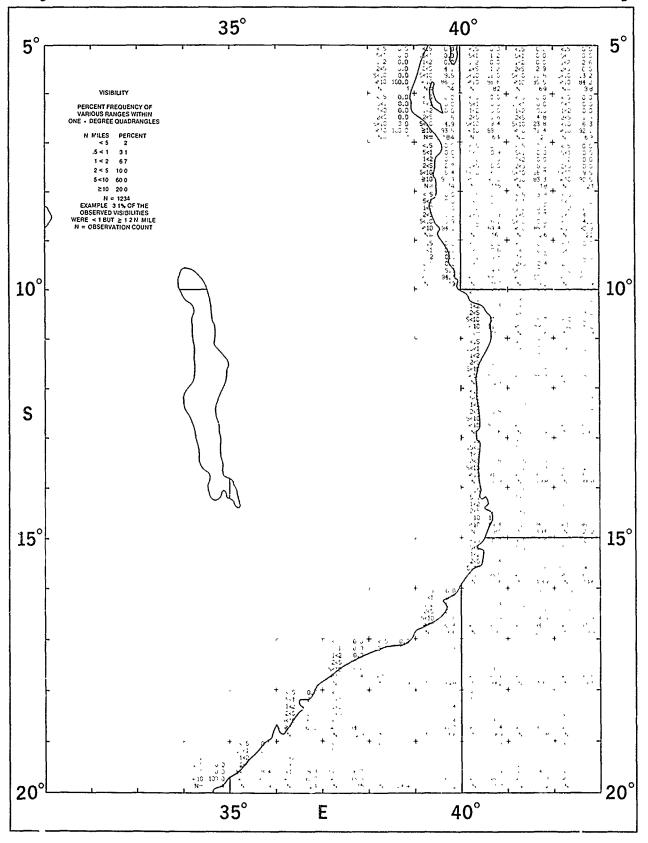




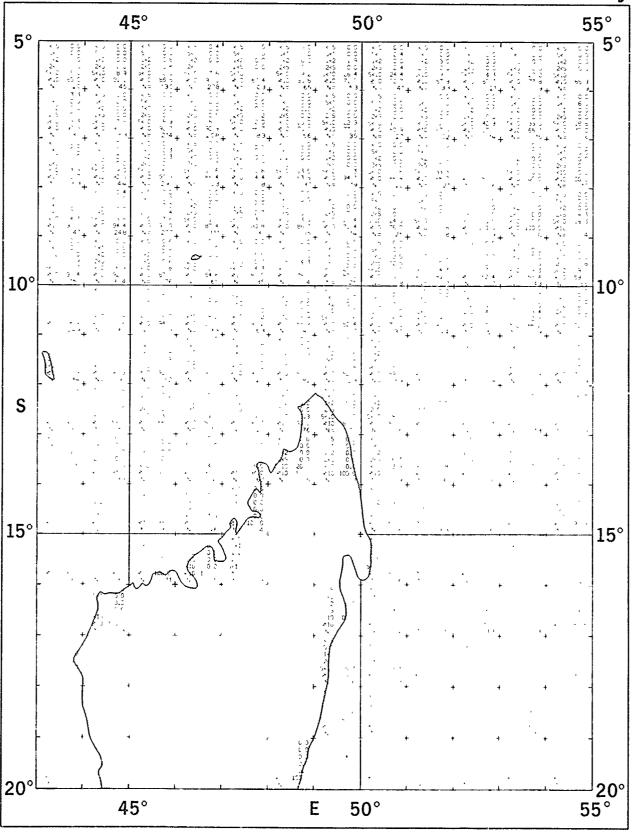


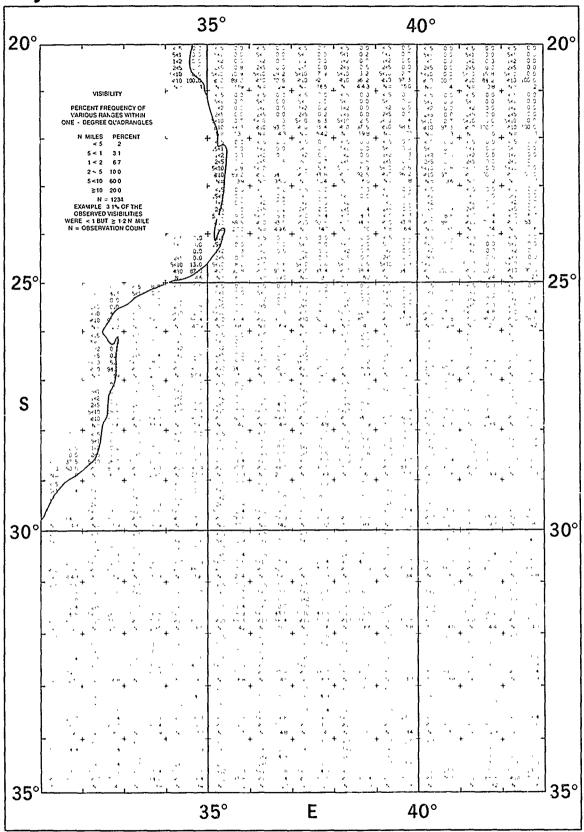




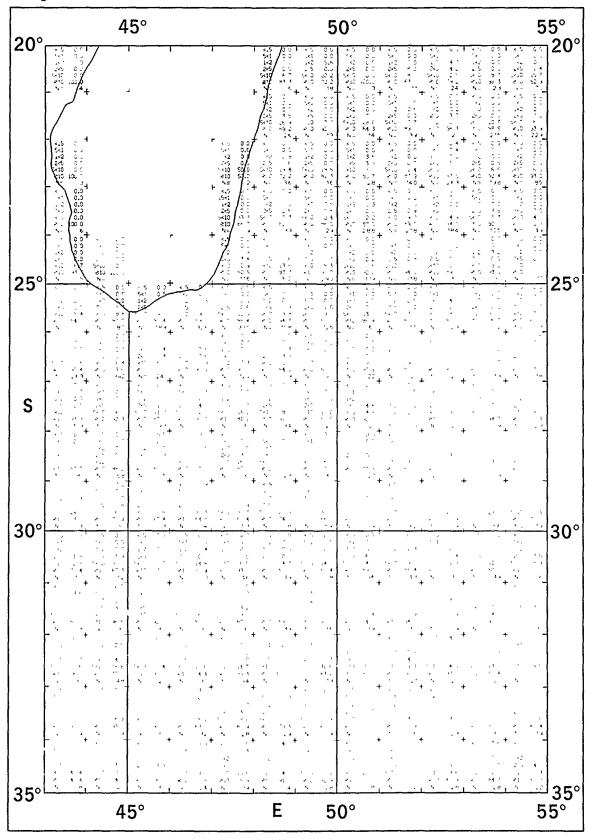


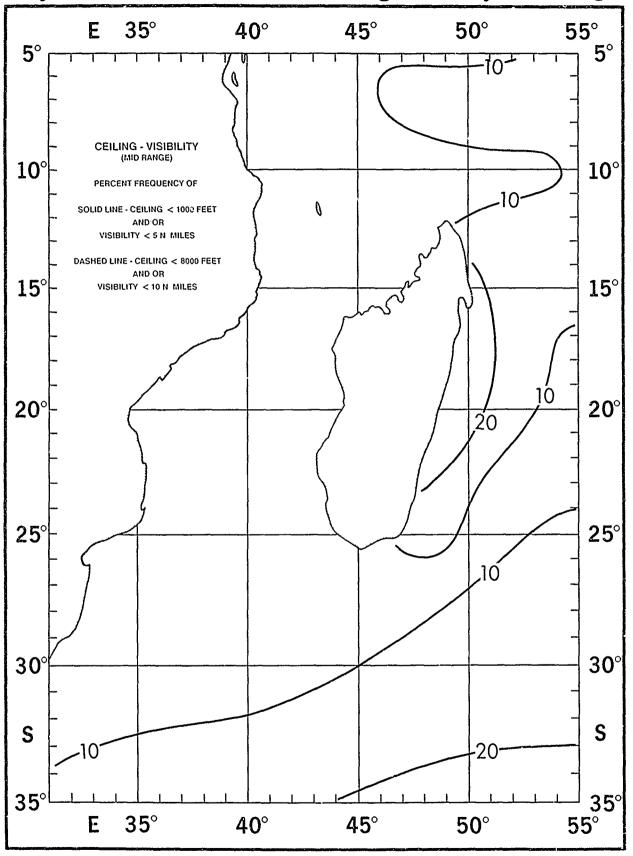
July





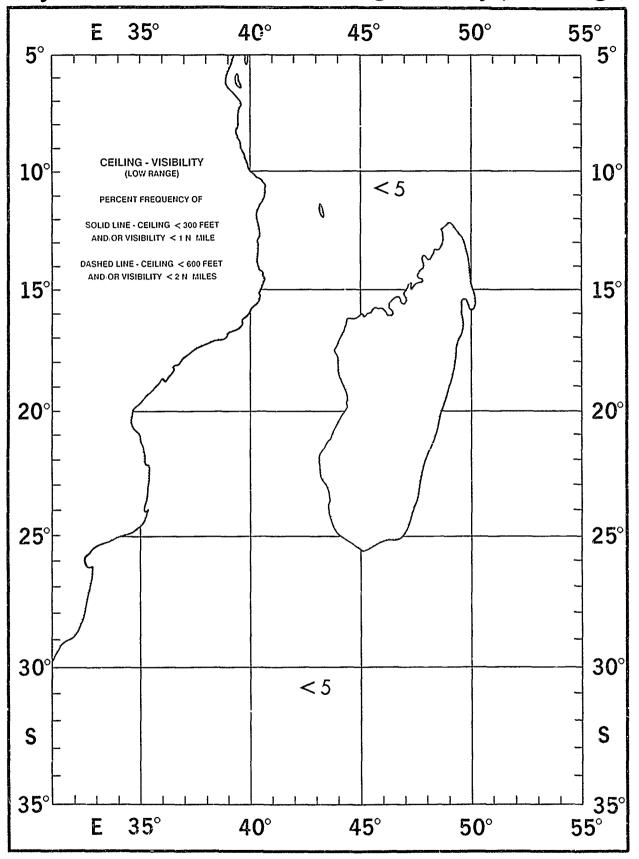
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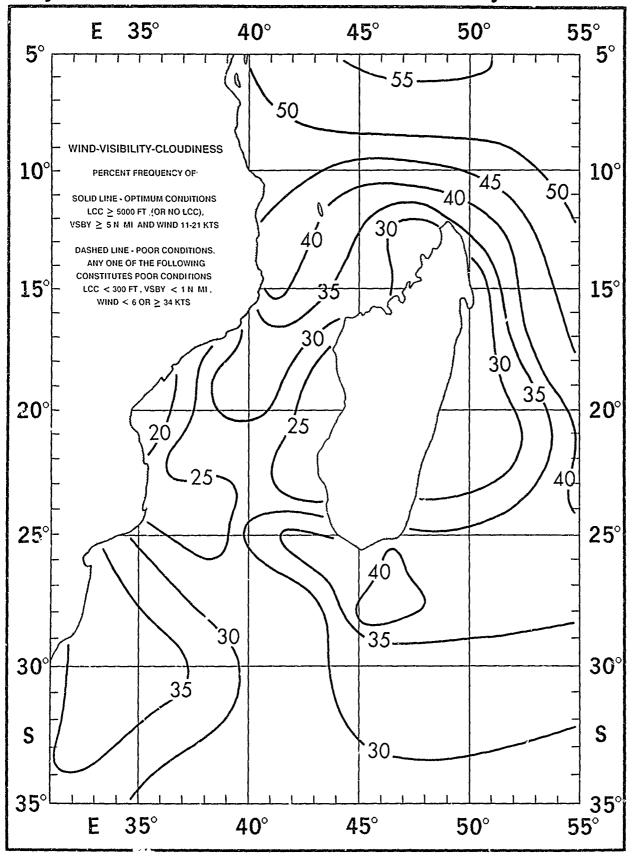


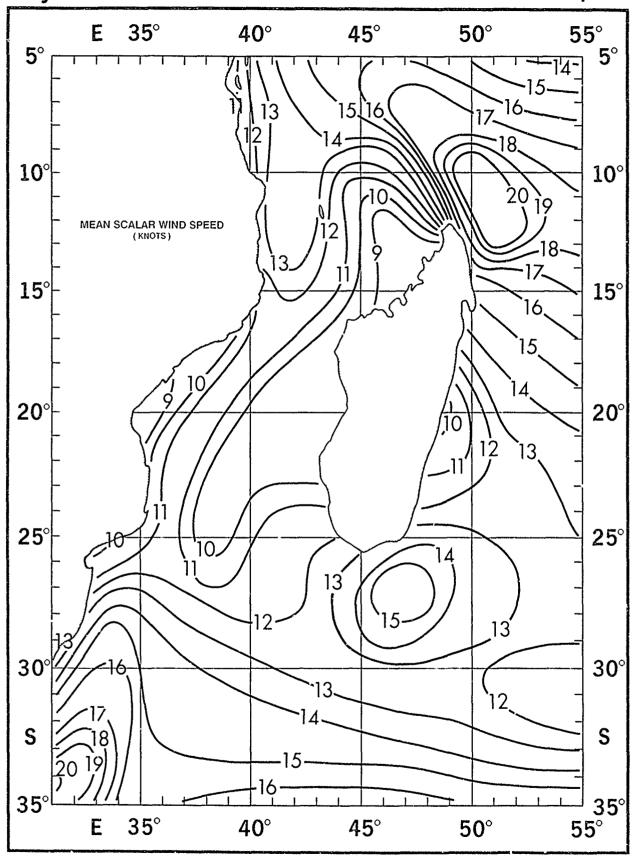


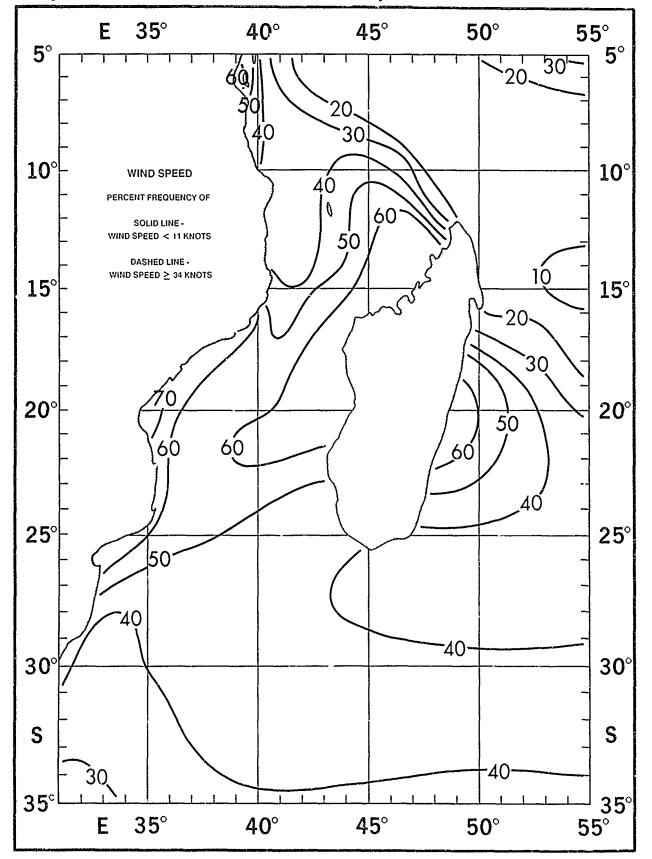


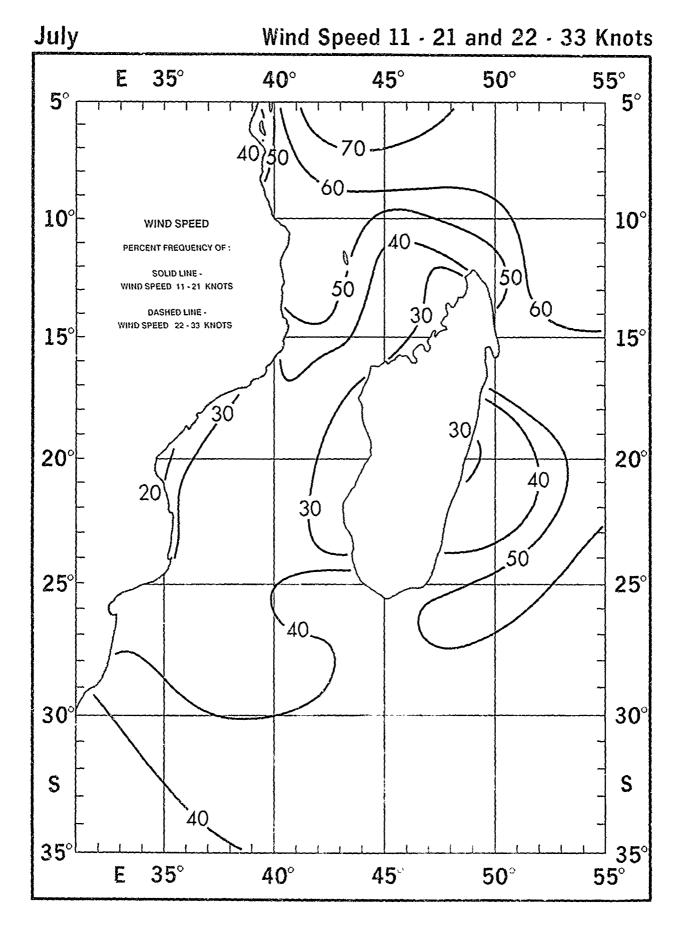
Ceiling - Visibility (Low Range)

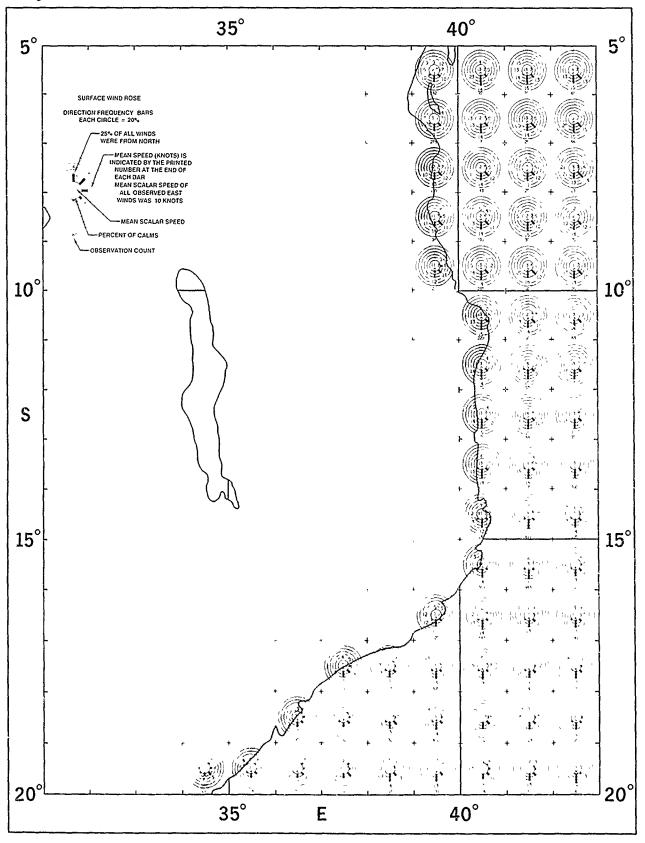


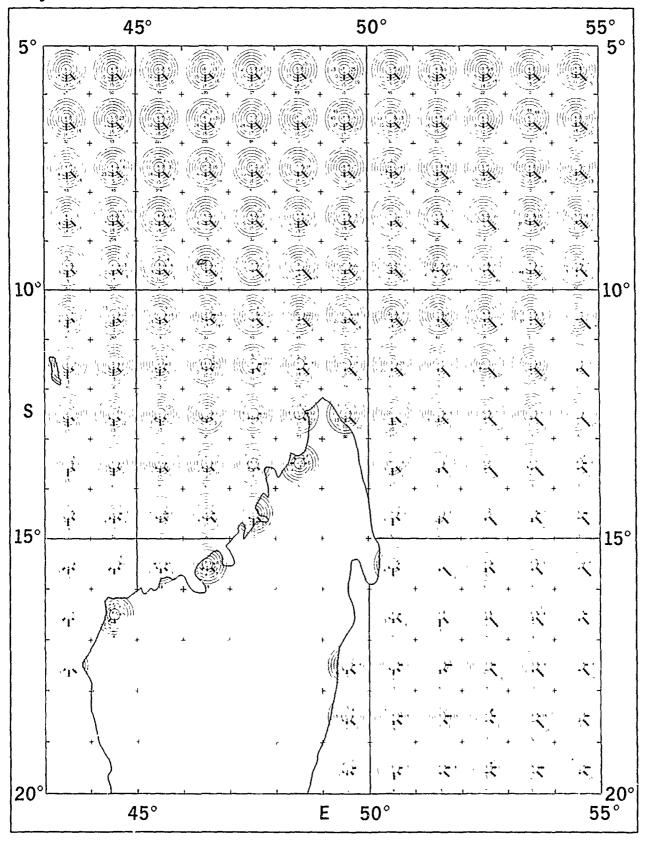


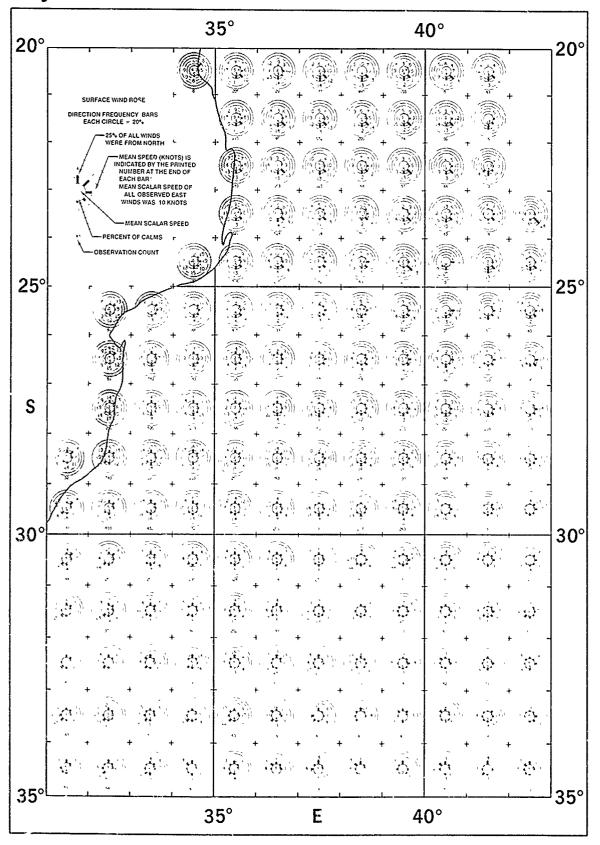


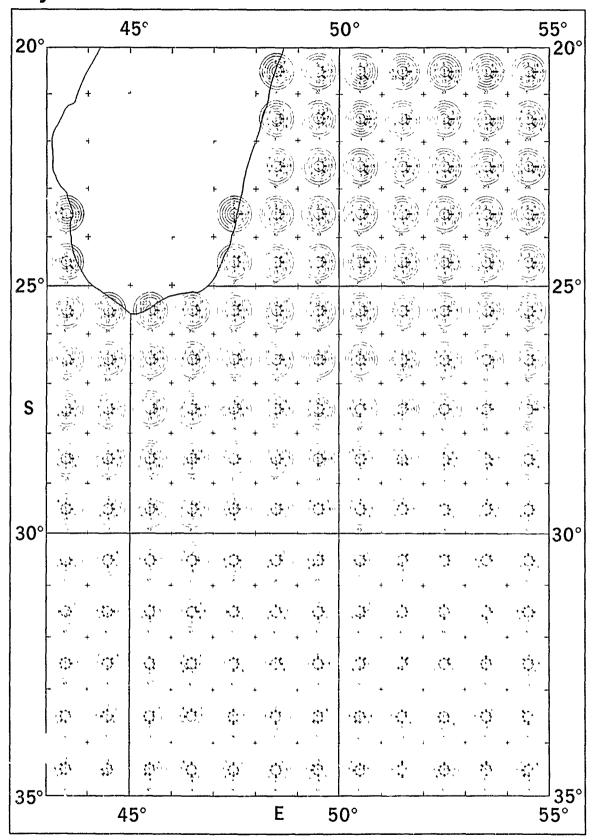






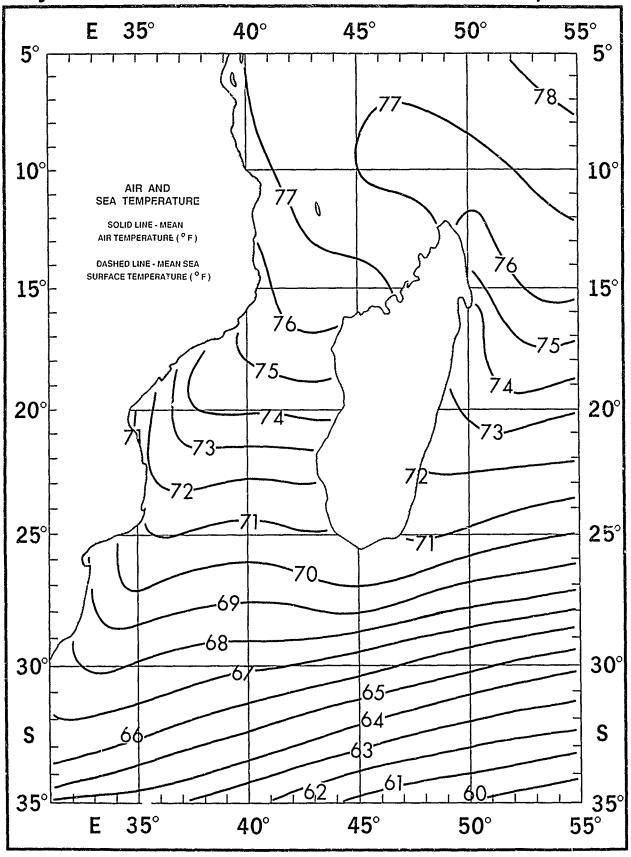


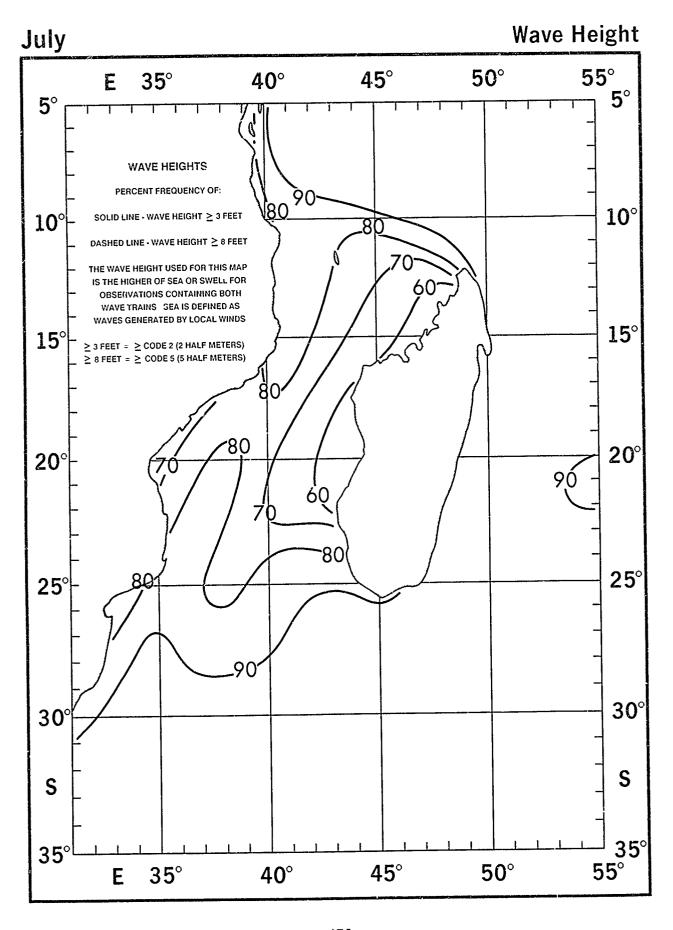


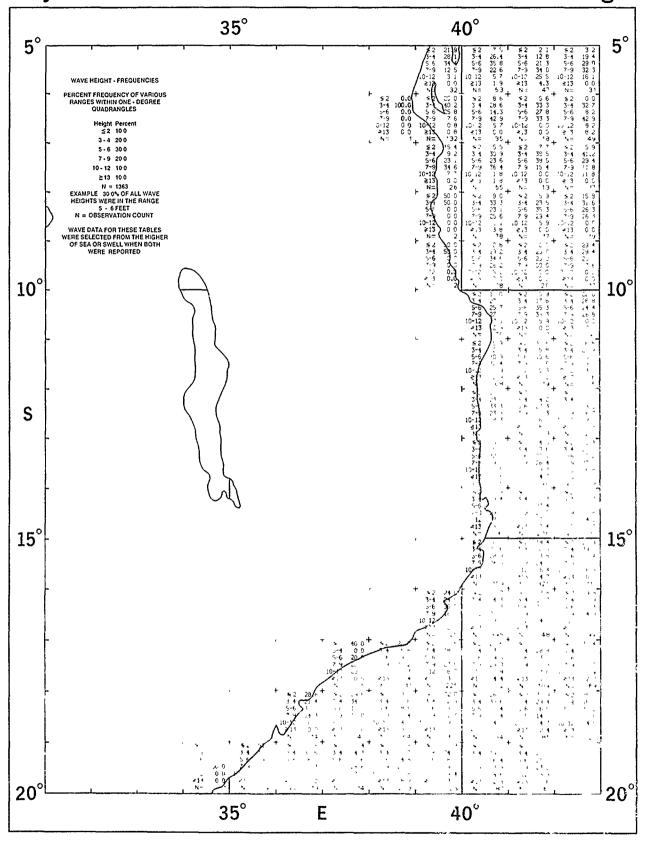




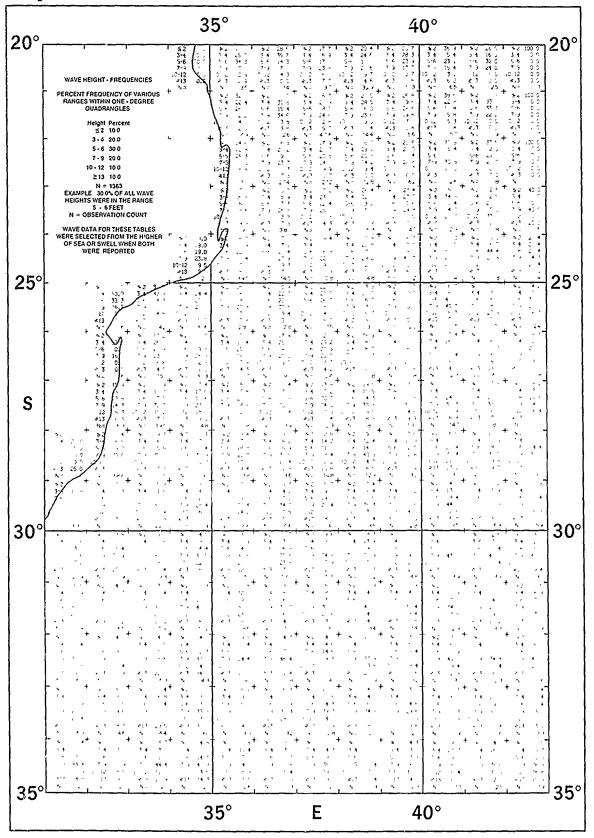
Air and Sea Temperature

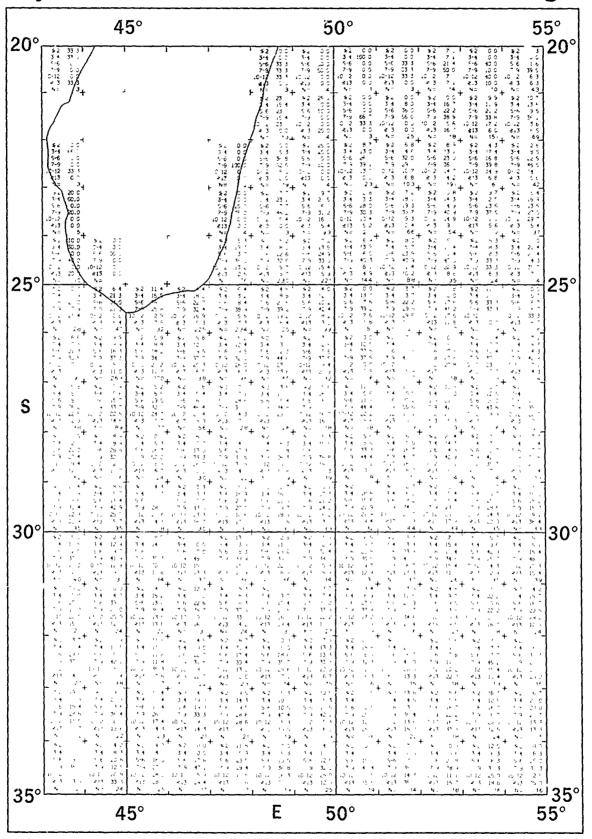


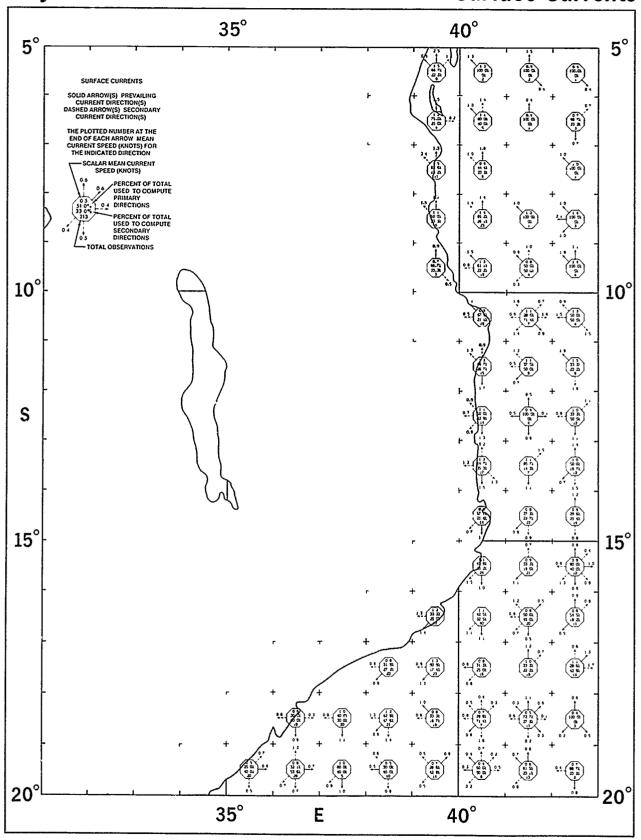


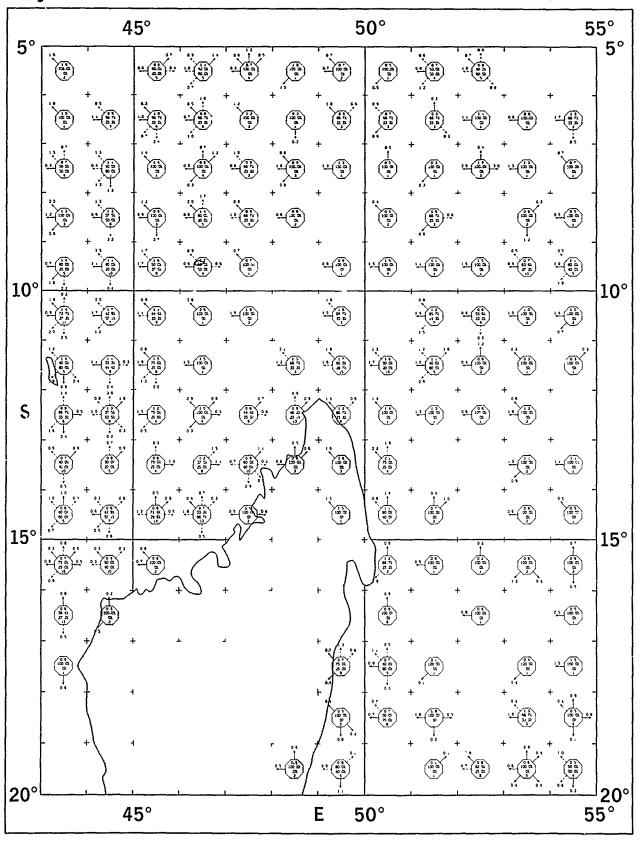


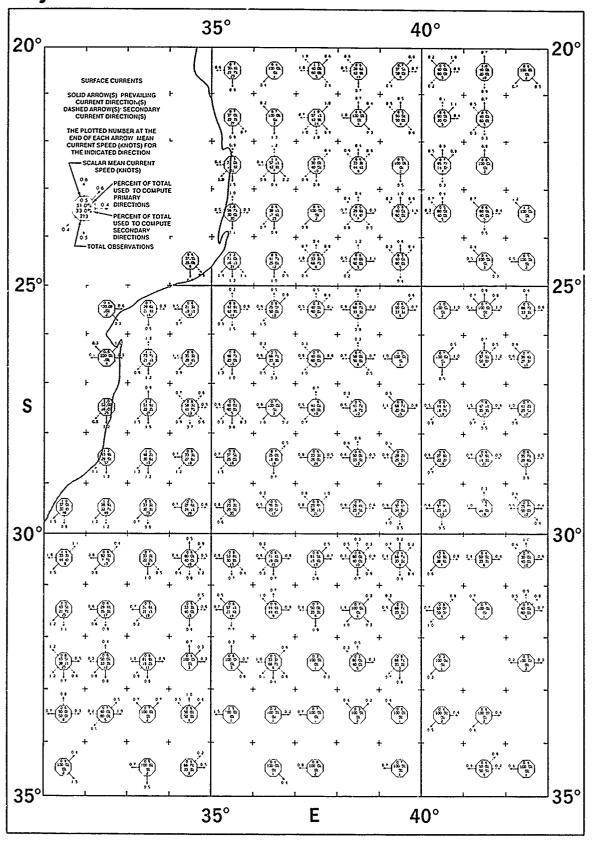
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10° S	5°			r o
10°	5°	\$2 77 \$2 07 \$3.4 11 5.4 167 3.4 18 5.6 30.8 \$6.5 30.8 \$6.5 20 \$6.5 17.4 \$6.5 117 \$6.5 177 7.9 48 \$2.7 \$3.5 \$3.6 \$17.4 \$5.5 117 \$6.5 177 7.9 48 \$2.7 \$3.5 \$3.0 \$4.1 \$1.2 \$3.4 18 \$7.7 \$7.9 48 \$2.7 \$3.5 \$0.0 \$1.2 \$1.3 \$1.4 \$1.3 \$1.4 \$1.3 \$1.4 \$1.3 \$1.4 \$1.3 \$1.4 \$1.3 \$1.4 \$1.3 \$1.4 \$1.3 \$1.4 \$1.3 \$1.5 \$1.3 \$1.3 \$1.3 \$1.3 \$1.3 \$1.3 \$1.3 \$1.3	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	000 3-4 000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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, 70 = 00	20°	45°	E 50°	20° 55°

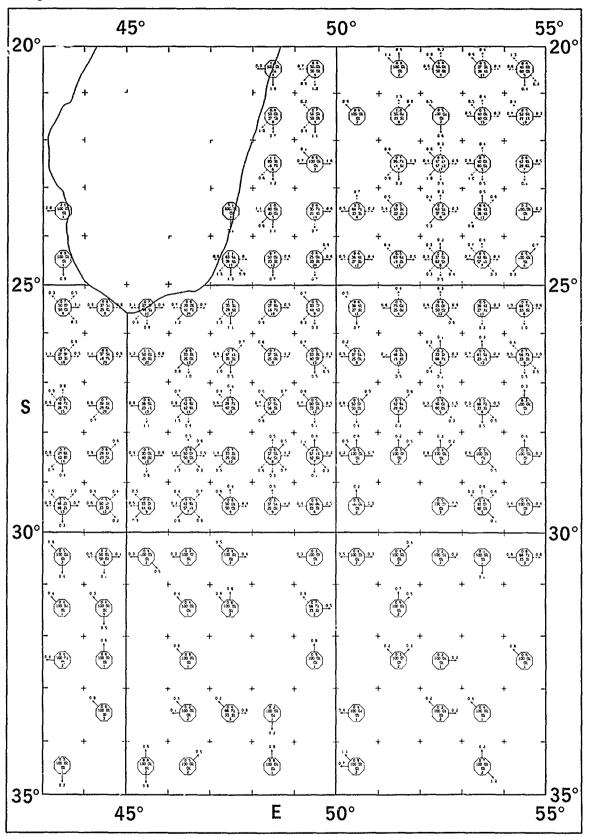






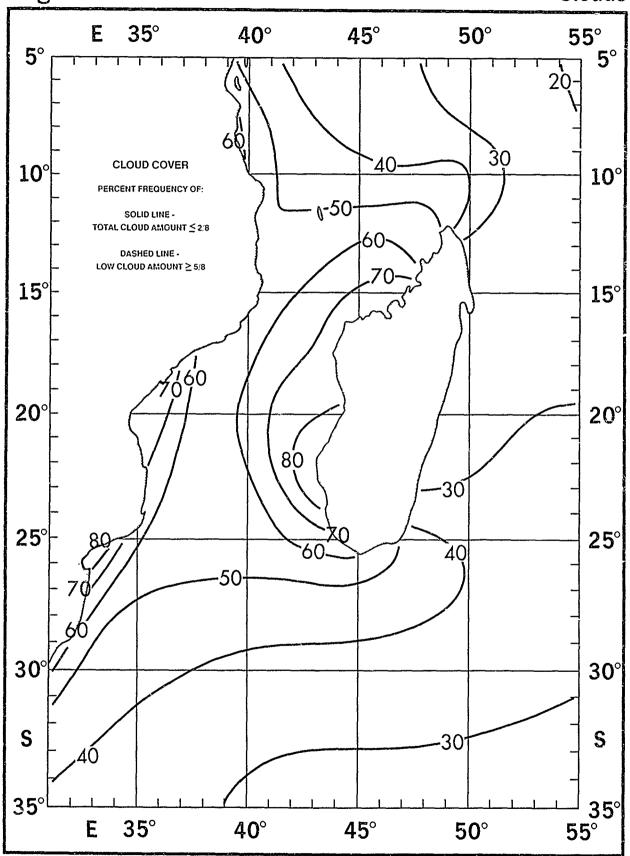


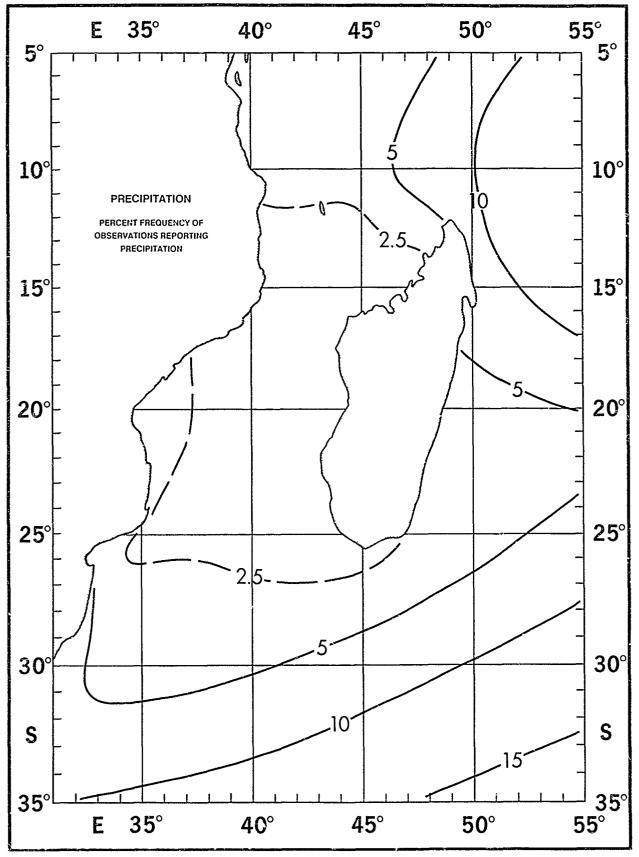


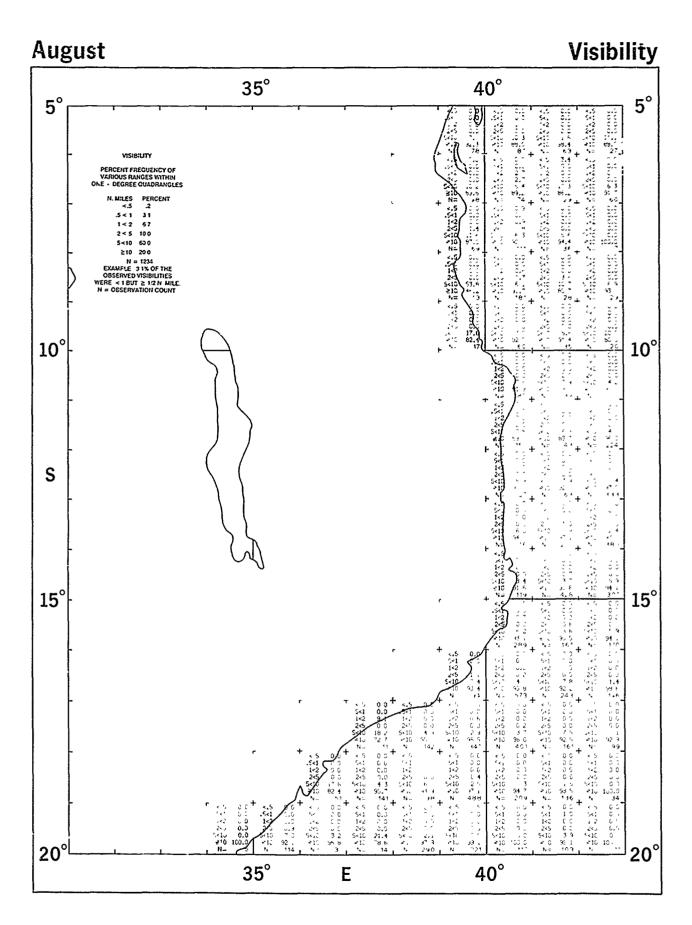


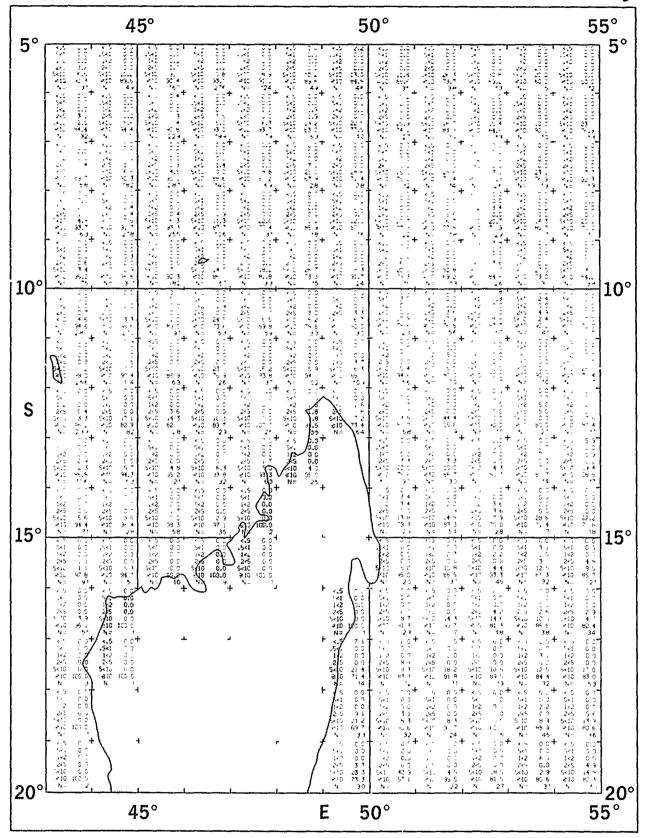


Clouds









Visibility

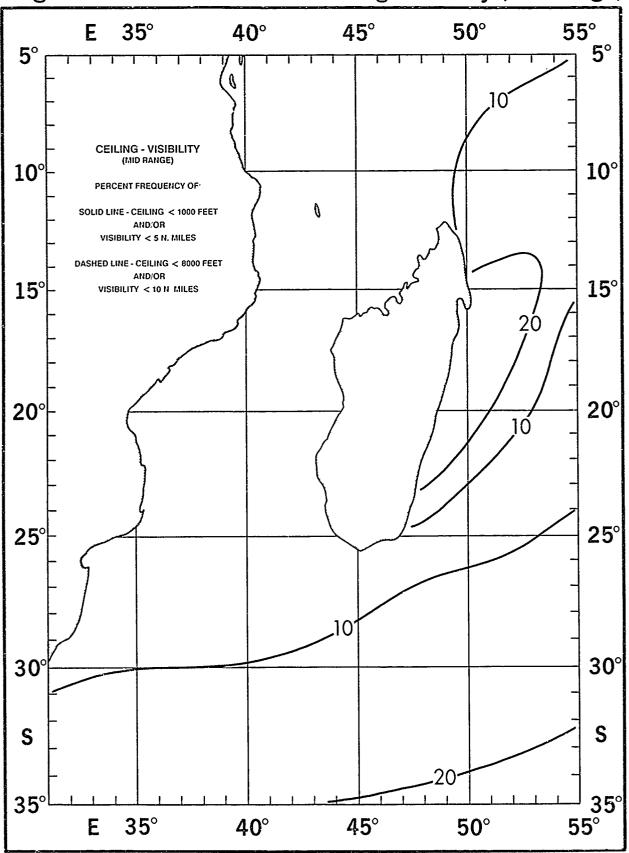
200		35°		40°	220
20°		25 00 12 05	4.5 00 4.5 00 4.5 541 0.0 541 0.0 541 0.0 541 0.0 541 0.5 142 0.5 142 0.5 142 0.5 145 0.5 145 5410 5410 5410 5410 5410 5410 5410	0 2 245 0 6 245 0 0 245 0.	0 5×1 00 0 1×2 0.0 0 2×5 00
	- Visibility Percent frequency of	\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	#10 94 7 #10 94 1 #10 N= 38 + N= 188 + N= <5 00 45 00 4.5 N= 00 54 0.2 54 1-2 00 1-2 0.0 1-2	95.4 \$10 \$5.7 \$10 \$5.6 \$10 \$4. 479 ha *6.3 Na 73 ha 50 0.0 \$4.5 0.0 \$4.5 0.0 \$4.5 0.0 0.0 \$51 0.0 \$4.0 0.0 \$4.0 0.0 0.0 \$14 0.0 \$4.0 0.0 \$4.0 0.0	9 210 100.0 9 No 1 0 + 4.5 0.0 0 541 0.0
	VARIOUS RANGES WITHIN ONE - DEGREE QUADRANGLES N MILES PERCENT <.5 2	+ 12 13 19 5	245 00 245 06 245 410 29 5410 39 5410 810 97 1 410 95.3 210 810 97 1 537 82 810 97 1 537 82 810 97 1 537 82 810 97 1 537 82	0.0 245 0.0 245 0.0 245 0.57 540 0.0 5410 67 5410 29 445 0.0 410 93.3 410 79 210 485 0.0 485 0	9 245 0.9 6 540 00 2 210 100 4 N° 2 0 + 1.5 0.0
	.5<1 3.1 1<2 6.7 2<5 10.0 5<10 600	SA 05 1-2 07 2-5 3 SA 7	541 00 541 00 541 142 00 142 03 142 245 06 245 03 245 410 72 5410 5 6 5410 ≩10 920 ≥10 93 6 ≥10	90 54 00 54 00 54 0 00 12 00 12 00 12 0 00 25 00 25 00 25 0 26 540 30 540 1 50 1 50 97 4 20 55 20 20 80	0 541 00 0 142 00 0 245 00 2 549 00 9 710 100 0
	≥10 200 N = 1234 EXAMPLE. 3.1% OF THE OBSERVED VISIBILITIES	(4) 00 T (4) 00 T (5) 00 T (6) 15	N= 363 + N= 360 + N= 45	00 T 4.5 00 T 4.5 00 T 4.5 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	5 + <.5 00 0 .5<1 00 0 .1<2 00
	WERE <1 BUT ≥ 1/2 N MILE N = OBSERVATION COUNT	r . s . a + (10 to 5 to	210 95 4 210 94 6 210 N= 540 + N= 167 + N= +5 05 + +5 00 + +5 5+ 00 541 00 541 +2 00 442 07 442	967 210 926 210 917 210 92. 90 N= 80 N= 36 N= 1 00 45 00 45 00 45 00 45 0 00 54 00 54 00 54 0	3 &10 100 0 3 N= 3 9 +45 0 0 5 541 0 0
25°	نيرو ۱۵ ^۳ ده	245 0 8 25 0 5 549 23.1 540 75 5 210 75 2.0 9 7 39 1 630	26 05 26 00 26 4.0 73 540 42 540 20 40 90 41 40 10 141 15 143 15 45 00 45 00 45	1 3 245 0 2 245 0 2 245 0 3 3 44	245 00 5410 50.0 5 10 50.0 5 10 50.0 6 45 00 25
	54' 00 54' 00 24' 00 24' 00 25' 55' 54' 25' 54' 55' 410 74' 2	-2 00	54, 00 54 00 54 42 00 142 00 42 25 00 245 00 245 40 63 540 19 740 80 93 8 810 15 810	.2 7 5×10 15 € 5×10 5 6 5×10 16 87 5 ≠10 82 2	0 541 00 0 0 142 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Na 73 N 202 6.3 + 5.5 0.0 5.4 5.5 0.0 5.4 6.5 0.0 1.4	*	N= 192 + N= (22 + N= < 5 0.0 + S 0.0 + < 5 541 0.0 541 0.0 541 (42 0.0 142 0.0 142 245 0.0 25 4 25 <10 0.0 540 N 540	63 N= 45 N: 36 N= 3 00 + 65 00 + 65 00 + 65 0 00 + 61 10 541 00 56 0 00 + 61 10 42 00 142 0 25 25 00 45 00 265 7.	0
	213 223 210 229 12 39 1 299 43 90 45 06 54 00 5 05 142 05 142 02	**************************************	210 49 4 210 43 1 20 N= 15 N= 59 N= <5 00 + 3 00 + 3 541 00 54 00 541 142 00 42 00 142	75.0 210 83.3 210 73.7 210 87 40 1 36 1 1 38 1 3	8 =10 90 3 0 % *85 0 + < > 0 0 7 0 5<1 0 0 7
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	54 00 54 00 44 00 142 00 142 00 143 00 143 00 144 0	54 00 541 00 142 04 142 05 245 20 245 1.4 5410 14.5 5410 11 0 5 810 83 810 87 .	541 000 541 000 541 142 000 142 05 142 245 13 245 100 245 1410 17 54 0 3 3 5410 810 87 0 213 69 1 210	0.0 541 0.0 541 0.0 541 0.0 541 0.0 6 142 0.0 142 0.0 142 0.0 142 0.0 143 0.5 15 0.5	0 541 00 0 442 00 0 245 08 2 5410 134 1
	N= +8/ 4- 29/ 	+ 5 00 + 5 00 + 5 00 + 5 00 + 5 00 5 1 00 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N= 23	162 N= 200 N= 211 N= 15 0.0 + 45 0.0 +	0
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	F S 0 6 T K S 0 0 T K F 0 5 T SK1 3 4 SK1 2 1 SK1 0 1 1K2 0 0 K2 0 0 1 K2 0 5 2K5 2 8 2K5 1 7 2K5 1 4 SK10 19 0 SK10 20 1 SK10 2K T	5cl 23 5cl 34 1c2 00 1c2 17 2c5 17 2c5 26 5cl0 234 5cl0 276 5		00 7 < 5 00 7 < 5 00 7 < 5 0 0 7 < 5 0 0 7 < 5 0 0 7 < 5 0 0 7 < 5 0 0 7 < 5 0 0 7 < 5 0 0 7 < 5 0 0 7 < 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 5<1 00 0 1<2 00 0 2<5 00 1 5<10 20 9
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	- N- 95 N- 7+ N 69 - 5 22 + 5 00 + 5 00 + 5 00 + 5 1 00 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N= 54 N= A ₂ + 45 00 + 45 00 + 5 541 00 541 00 142 00	N= 42 N 37 N= <5 00 + <5 00 + <5 5<1 00 5<1 00 5<1 1<2 00 1<2 00 1<2	34 N= 36 P= 32 N= 3 00 + 45 00 + 45 00 + 45 0 00 541 00 541 00 541 0 34 142 00 142 00 142 0	0 N- 33 0 1 < 5 0 0 - 0 5<1 0 0 0 1<2 0 0
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Visibility

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S	x,5	142 0.9 142 0.0 142 0.0 1 245 0.0 275 1.2 271 2.0 1 545 8.4 545 0.6 545 5.0	141 0.0 41 0.0 54 142 0.0 142 0.0 142 0.0 142	7 ± 0 154 0 54 0 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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30	45 00 45 00 141 00 54 20 142 00 142 00 245 00 245 20 5410 18.0 5410 24.5 410 62.0 410 71 4		45 00 45 00 54 341 00 541 00 54 142 00 140 07 144 245 00 20 00 25 540 60 540 21 144 240 840 ≥10 %9 ≥10	2	<2 C T <5 . 7
	N= 50 N= 49 <5 00	N= 45 N= 50 N= 51 45 05 + 1 00 + 1 05 54 05 54 00 54 00 142 00 142 00 142 00	*= 50 %= 51 N= * 5 00	= 48 N= 52 N= 56 N	
	Set0 14 8 Set0 20 0 #10 85 2 ≈10 76 7 N= 27 N= 30 Set1 0 0 Set1 2 2	5410 19 5 5410 0 0 5410 18 6 210 25 6 210 97 1 210 79 2 N 41 N 35 N 48 45 25 4 45 0 0 4 45 4.0"	5<10 18 9 5<10 16 2 5<10 210 81 1 210 84 8 210	0 212 5<10 103 5<10 213 5<10 113 5< 0 697 <10 672 ≥10 770 ≥10 891 ≥ = 33 N 39 N= 61 N= 32 N 5 00+ <5 0 + <5 2 + <5 00+	
	142 0 0 142 0 0 245 0 9 245 6,7 440 23 3 5410 20 9 410 76 7 410 71.1	142 0.0 142 0.0 142 0.6 245 5.0 245 16.2 245 0.0 5410 20.0 5416 29.7 4410 16.0 210 72.5 210 54 1 210 80.0	142 00 142 00 142 245 00 245 00 245 5410 25 8 5410 13 6 5410 210 24.2 210 85 4	2 0 0 142 11 142 0 0 2 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1	2 0 0
	- 45 00 + 45 00 541 00 541 00 142 38 142 00 245 77 245 00 5410 26 9 5410 22 2	45 00	+ 45 00 + 44 00 + 47 541 00 541 122 00 144 00 145 00 145 00 145 5410 294 5410 291 54	r 00 t 25 00 t 25 00 t 25 00 t 2 1 00 121 00 541 00 541 00 5 2 00 12 00 122 00 122 00 1 2 00 122 00 122 00 1 2 00 125 00 122 05 1 5 0 5 3 5 40 125 5410 144 5410 31.6 5	5 00 - <1 00 <2 00 <5 00 10 30 0
	≈10 61 5 ≈10 77 8 N= 26 N= 27 <5 00 ⁺ <5 00 ⁺ 5<1 00 5<1 00 1<2 0.0 1<2 00	#10 /31 #10 75 0 #10 75 0 N= 30 N= 16 N 16 < 5 00 + 45 00 + 45 00 - 541 00 541 00 541 00	≥10 70 6 ≠10 76 9 ≠13 N 17 N= 13 N=	- 16 N 24 N= 32 N= 19 N 5 00 + 4 00 + 4 00 + 4 00 + 4 1 JO 41 B 3 141 00 54 00 1 2 00 142 00 142 4 3 142 00 1	10 79 0 = 10 -5 0 0 <1 0 0 <2 0 0
35°	√5 3 3 2<5 4 2 5<16 33,3 5<10 33 3 ≠10 63,3 ≥10 62,5	2<5 3 7 2<5 0 0 2<5 8 7 5<10 33 3 5<10 22 6 5<10 26 1 ≥10 63 0 ≈10 77 4 ≥10 €5 2	2<5 4 3 2<5 4 5 2<5 5<10 13 0 5<10 36 4 5<10 \$10 82 6 \$\text{\$\text{\$\chi_{10}\$}}\$ 10 59 1 \$\text{\$\text{\$\chi_{10}\$}}\$	5 2 7 2<5 0 0 2<5 0 0 2<5 0 0 2 0 32 4 5<10 27 8 5<10 30 4 5<10 31 8 5< 0 64 9 ≥10 63 9 ≥10 65 2 ≥10 68 2 ≥	35°
	4	.5°	E 50°		55°

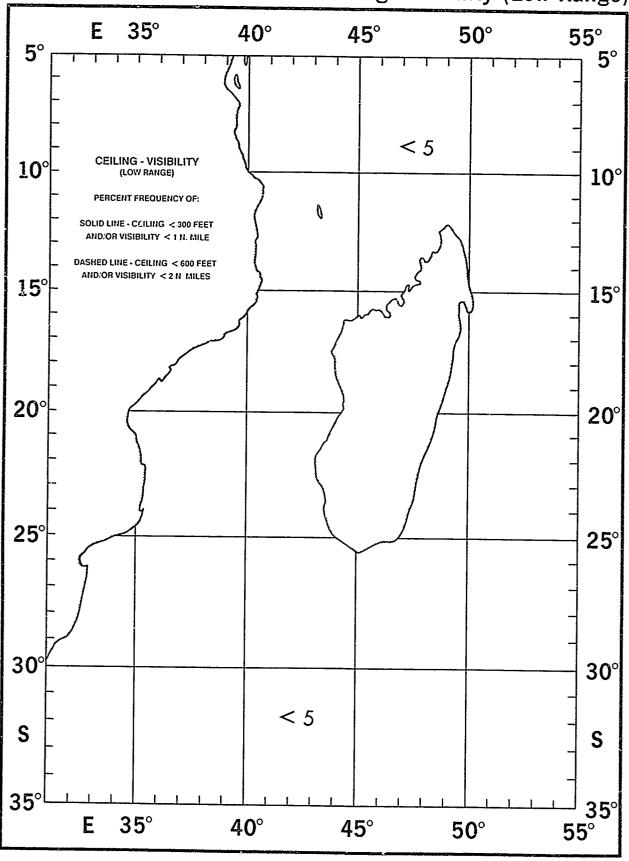


Ceiling - Visibility (Mid Range)



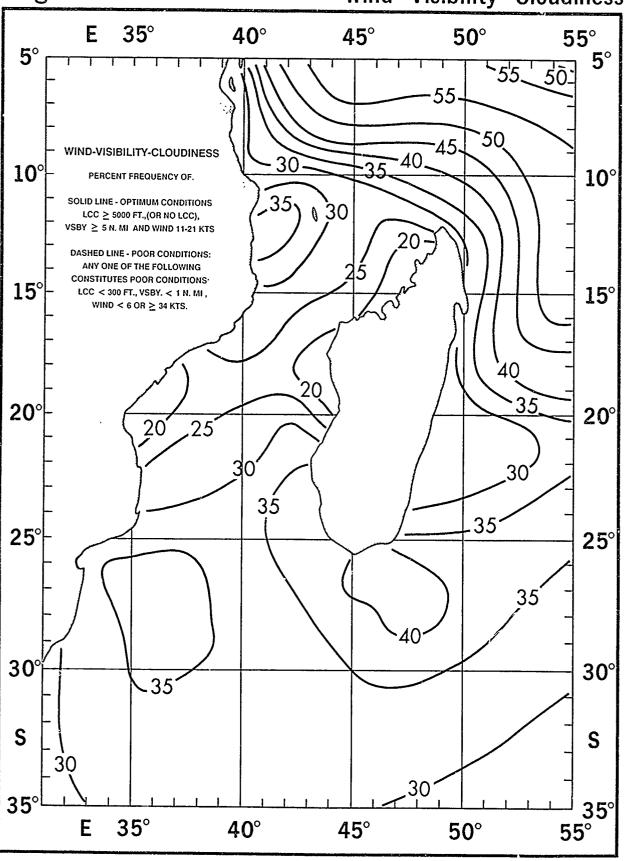


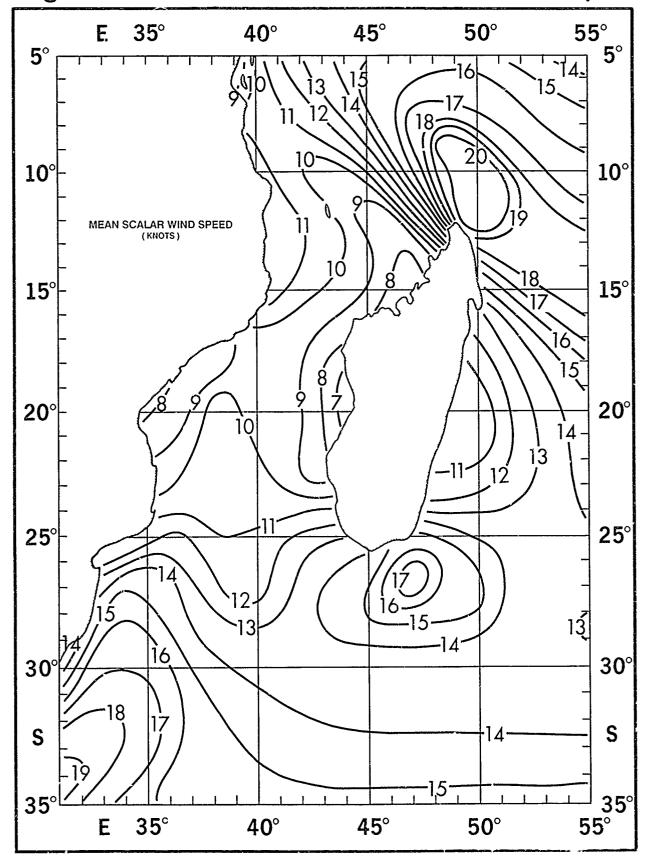
Ceiling - Visibility (Low Range)





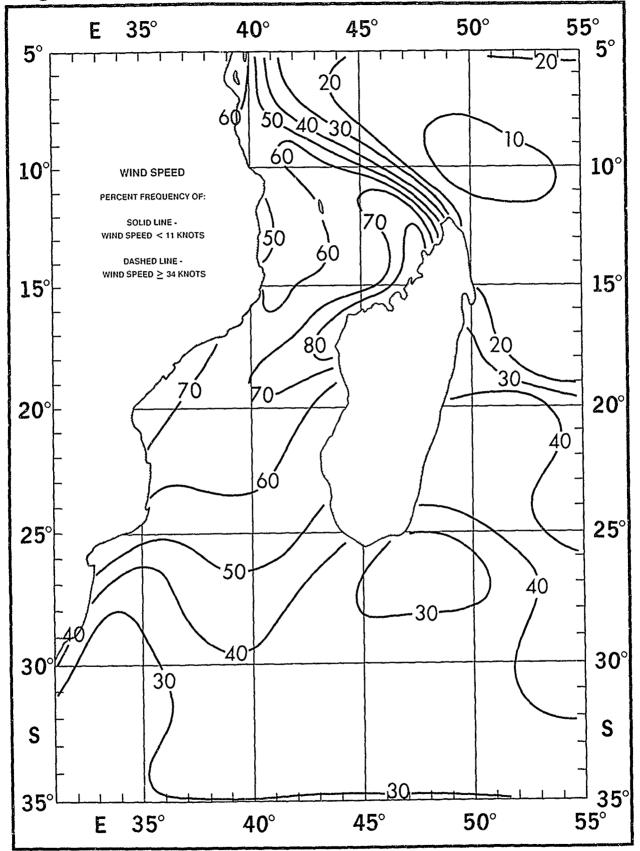
Wind - Visibility - Cloudiness

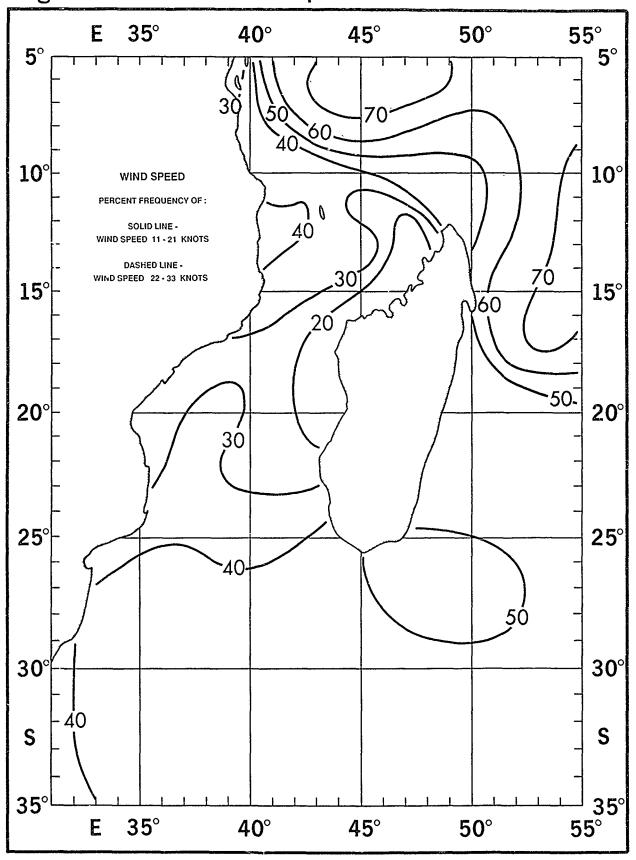


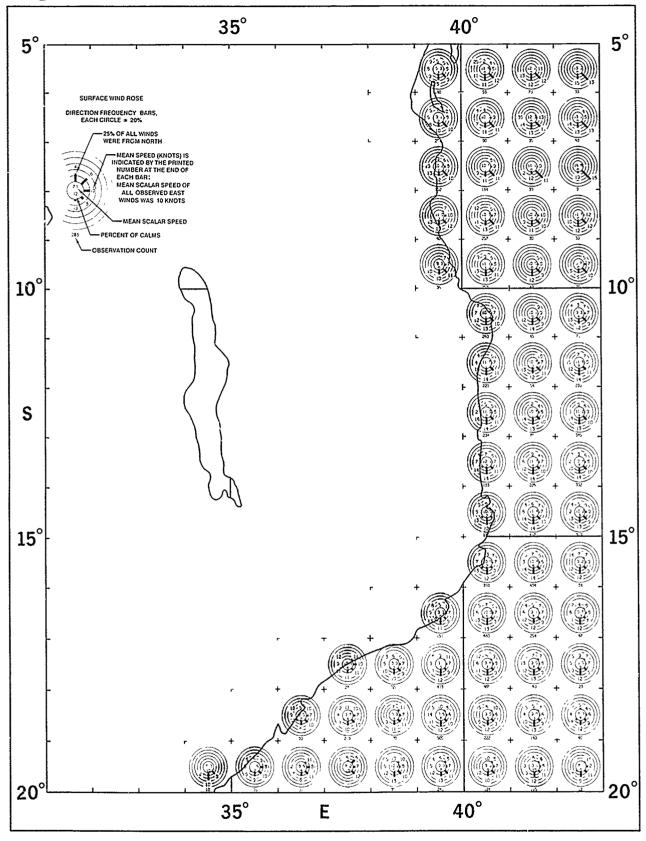


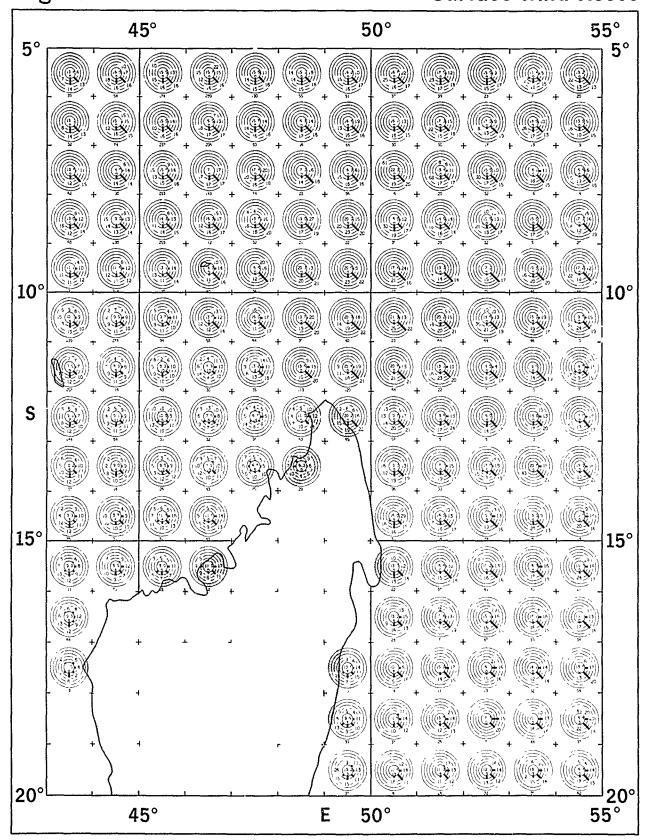


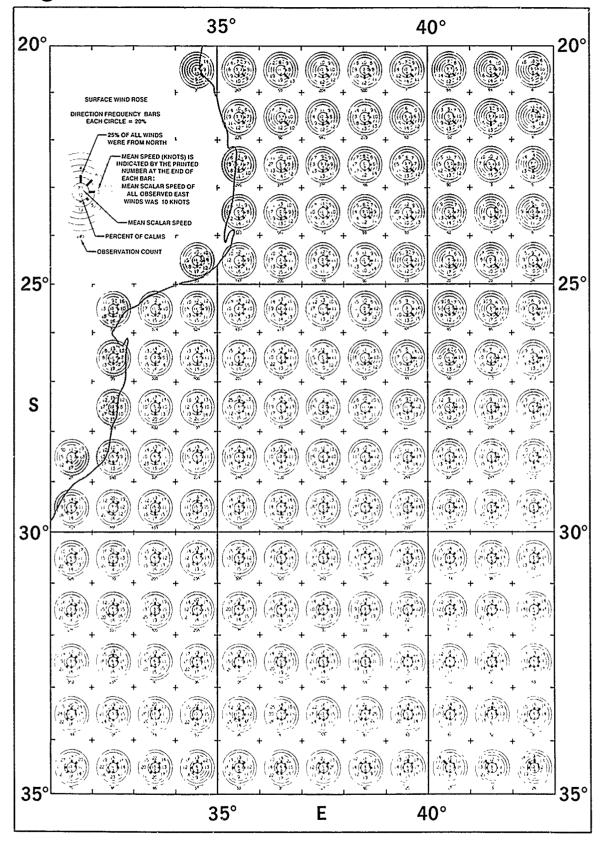
Wind Speed <11 and ≥34 Knots

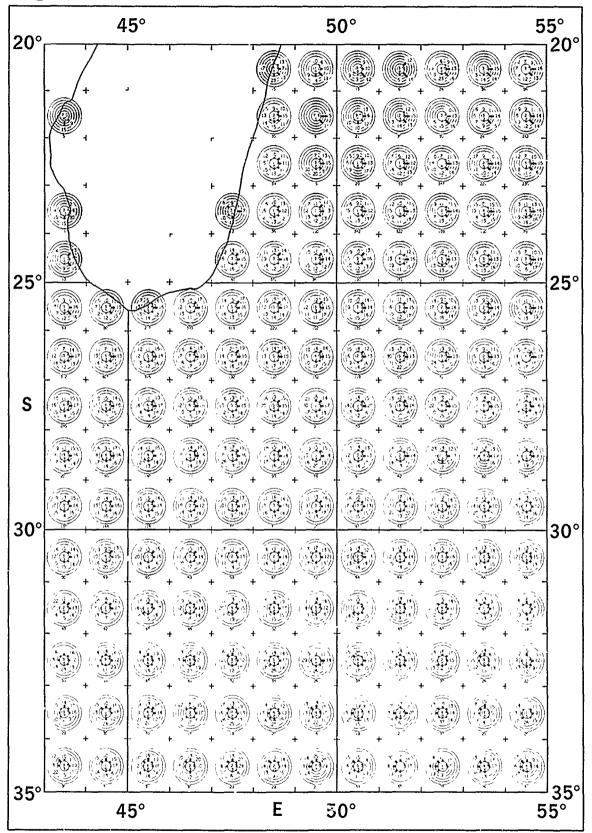






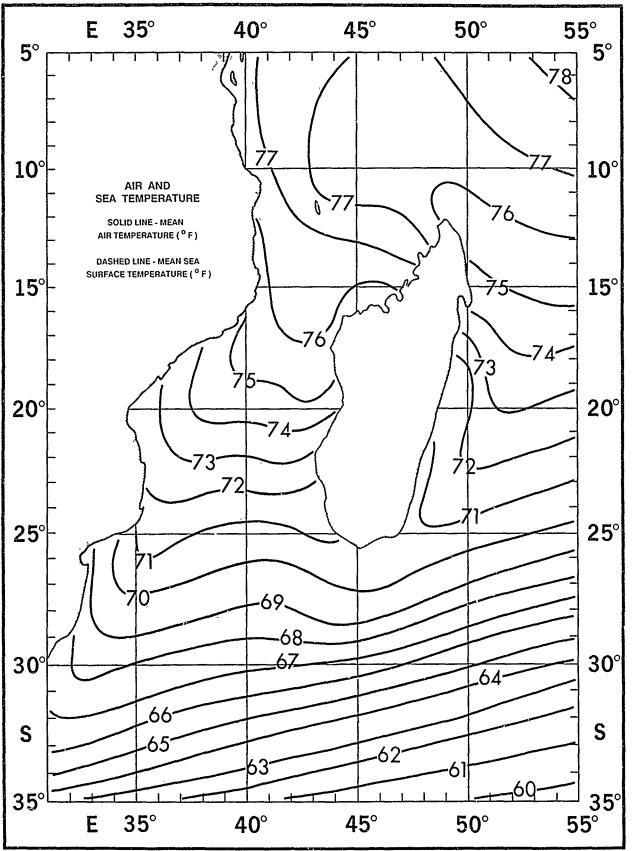




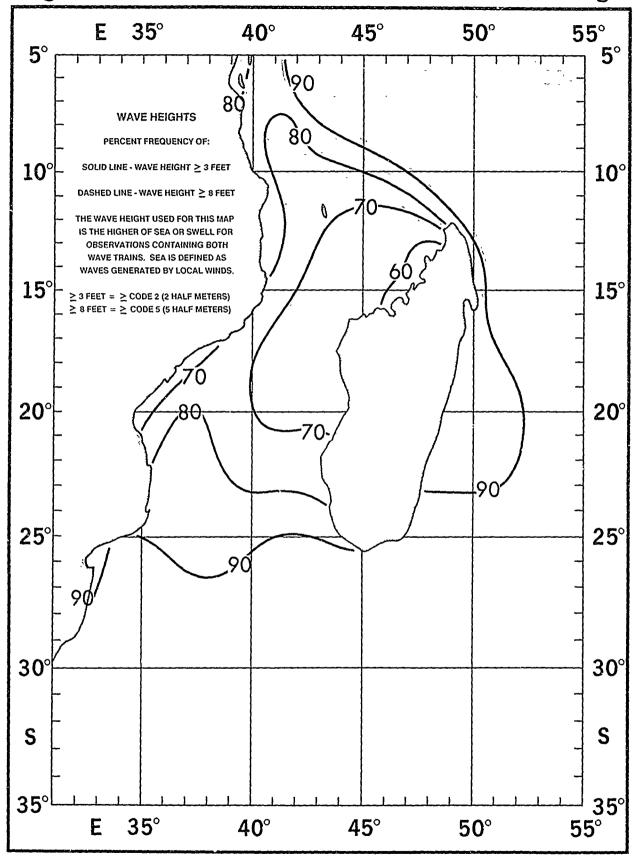


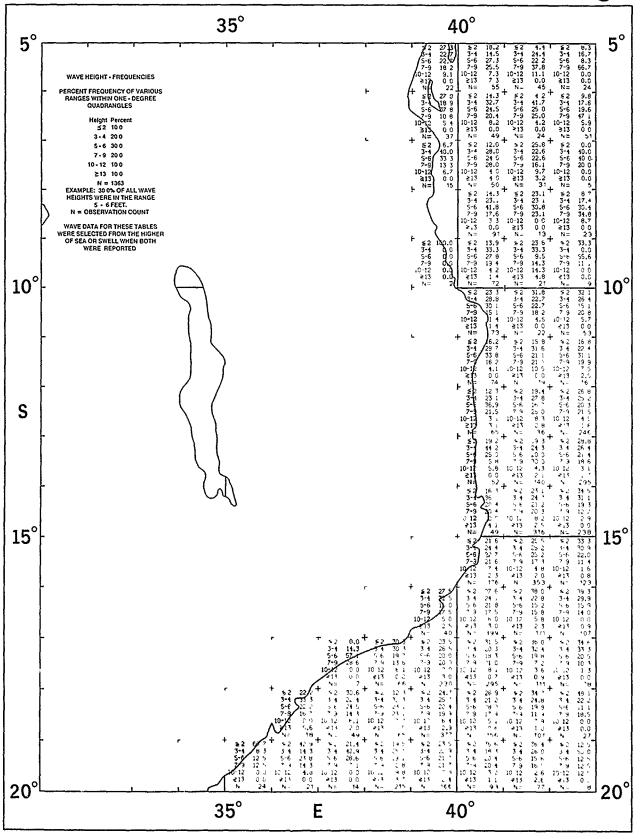


Air and Sea Temperature





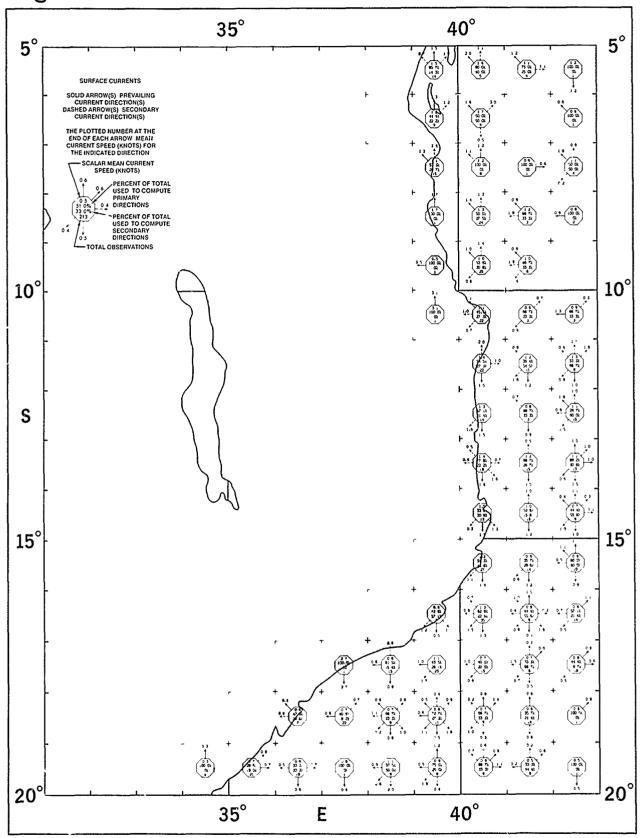


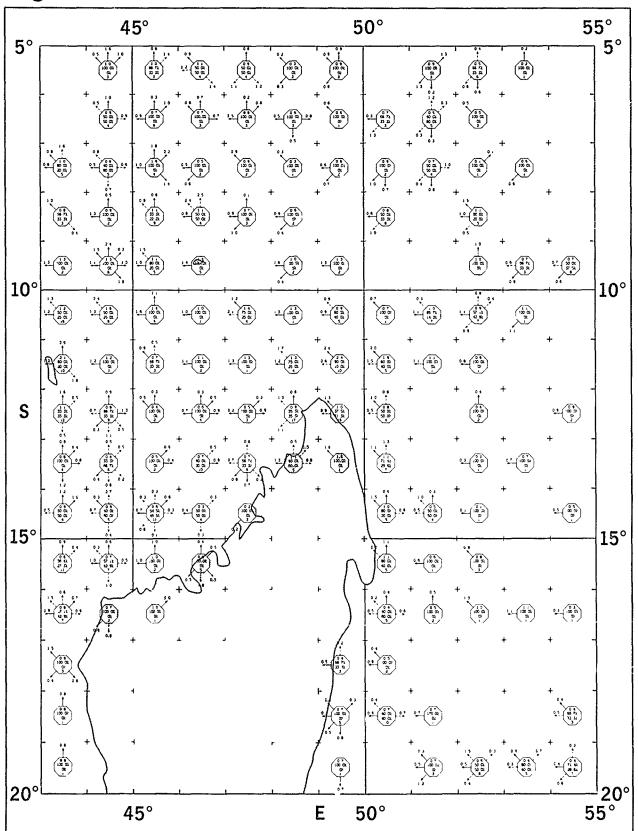


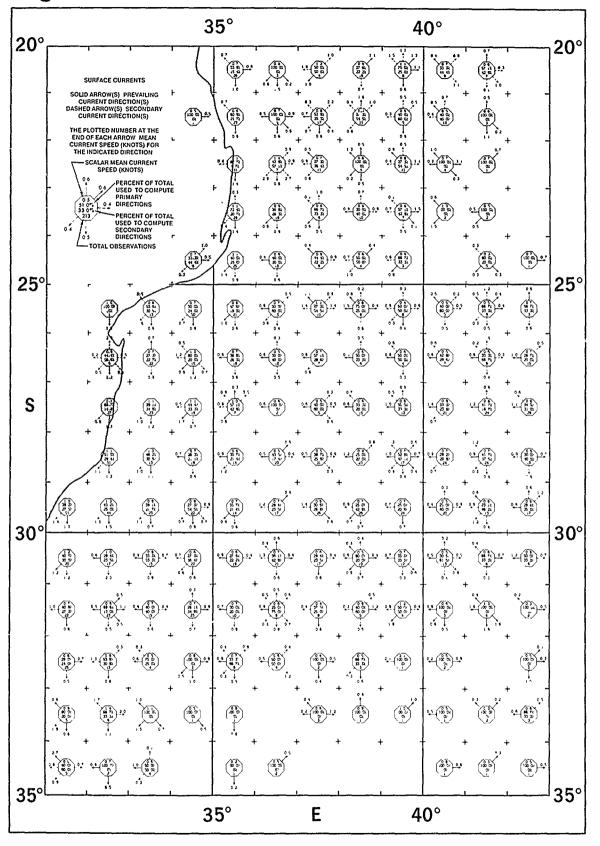
4E0	EO.º	re°
45° 5° 62 7.1 52 5.9 52 3.8 6	50°	55°
3-4 14.3 3-4 8.8 3-4 7.6 3- 5-6 21.4 5-6 17.6 5-6 22.2 5- 7-9 57.1 7-9 47.1 7-9 41.7 7- 10-12 00 10-12 11.8 10-12 14.4 10-1 ≥13 00 ≥13 8.8 ≥13 8.3 ≥1 N= 28+ N= 34. N= 132+ N £2 7.7 ≤ 2.0 ≤2 5.7 ± 14 260 7-4 8.0 ≥2 5.7 ±	23.0 5-6 27.5 5-6 8.3 5-6 22.2 5-6 11 5 5-6 42.3 5-6 27.5 5-5 79 47.2 $7-9$ 30.6 $7-9$ 56.4 $7-9$ 23.1 $7-9$ 7.2 12.0 10-12 13.7 10-12 19.4 10-12 15.4 10-12 15.4 10-12 11.5 10-12 $9.2 \ge 13$ 7.8 ≥ 13 5.6 ≥ 13 8.3 ≥ 13 0.0 ≥ 13 0.0 ≥ 13 0.0 ≥ 13 0.1 ≥ 13 1.3 10-12 11.5 10-12 ≥ 13 11.5 10-12 \ext{10-12}	0.0 3-4 0.0 3-4 30.0 8.6 5-6 66.7 5-6 10.0 1.4 7-9 0.0 7-9 40.0 0.0 10-12 0.0 10-12 0.0 0.0 ≥13 0.0 ≥13 0.0
7-9 38.5 7-9 29.4 7-9 48.1 7- 10-12 11.5 10-12 11.6 10-12 11.3 10-1 13 3 0.0 ≥13 15.7 ≥33 8.0 ≥1 N= 26, N= 51, N= 174 ≥ N 52 8.0 ≤2 8.1 ≤2 5.4 ≥ 7.4 ≥ N 34 22.0 3-1 27.4 3-4 18.9 3- 35 20.0 3-1 27.4 3-4 18.9 3- 25 8.0 5-6 30.0 5-6 30.8 5-6 19.8 5-7	5.9 \$2 00 \$2 00 \$2 4.8 \$2 0.0 \$2 12.5 \$2	7+ N= 3+ N= 10- 0.0
10-12 14 0 10-12 10 4 10-12 12 6 10-1 213 2.0 ≥ 13 10.4 213 6.3 213 6.3 N= 50 ≥ 18 10.4 213 6.3 22.4 N ≤2 41 ≤2 4.2 ≤2 9.1 ≤ 3-4 18 4 3-4 18.9 3-4 20.3 3- 5-6 16 3 5-6 22 2 5-6 18.8 5-7-9 44.9 7-9 35.5 7-7 10-12 16.3 10-12 12.7 10-12 12.7 10-1 ≥13 0.0 ≥13 6.6 ≥13 3.6 ≤1	9.2 3-4 6.0 3-4 0.0 3-4 23.8 3-4 25.0 3-4 37.5 3-4 12.18.5 5-6 22.0 5-6 11.8 5-6 23.8 5-6 23.0 5-6 12.5 5-6 5.18.8 5-6 23.0 5-6 12.5 5-6 5.0 5-6 12.5 5-6 5.0 10.12 12.5 10.12	8.7 7-9 27.3 7-9 20.0 7 4 10-12 9.1 10-12 10.0 4.3 ≥13 0.0 ≥13 0.0 23 + N = 11 + N = 10 3.7 ≤2 0.0 ≤2 0.0 1.1 3-4 0.0 3-4 7.7 9.6 5-6 50.0 5-6 46.2 4.4 7-9 25.0 7-9 15.4 1.1 10-12 25.0 10-12 23.1 0.0 ≥13 0.0 ≥13 7.7 27 + N = 4 + N = 13
\$2 14.6 \$2 15.2 \$2 8.5 \$ \$-4 20.8 \$-4 247 \$-4 25.4 \$-5 \$-56 23.1 \$-6 22.6 \$-56 23.8 \$-7 \$-9 33.8 \$7-9 30.9 \$7-9 33.8 \$7-7 \$10-12 \$6.2 10-12 \$4.9 10-12 \$5.4 10-1 \$13 1.5 \$13 1.6 \$13 3.1 \$21 \$13 0. \$2 24.3 \$2.3 \$2.3 \$2.3 \$2.3 \$2.3 \$2.3 \$2.3 \$2	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0 0 · \$2 3.4 · \$2 0.0 4.5 3-4 13.8 3-4 10.3 2.7 5-6 17.2 5-6 13.8 7.3 · 9 37.9 7-9 \$1.7 6.4 10-12 13 8 10-12 20.7 91 \$13 138 \$213 3 4 22 N= 29 N= 29
5-6 23 9 5-6 196 5-6 27 5 5-7 9 31 5 7-9 20 6 7-9 118.8 7-10-2 1 8 10 12 2 9 10-12 4.3 10-1 13 1 4 21 0.5 2 1 8 10 12 2 9 10-12 4.3 10-1 13 1 4 21 0.5 2 13 1 4 21 0.5 2 13 1 4 21 0.5 2 13 1 4 21 0.5 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	20.5 $5-6$ 23 4 $5-6$ 11.1 $5-6$ 5.0 $5-6$ 10.0 $5-6$ 11 4 $5-6$ 5.2 $5-6$ 7.9 5.0 $7-9$ 5.	8.2 5-6 12 5 5-6 22.2 1 10 7-9 40 6 7-9 11 1 8 4 10-12 15.6 10-12 11 1 4 13 813 18 8 813 22 2 49 N= 32 N- 9 33 3-4 16 7 3-4 16 7 00 5-6 16 7 5-6 00 1 3.3 7-9 66 7 7-9 43 3 3.3 10 12 00 10-12 00 0 00 813 00 \$13 00 \$13 00
\$ 292 \$2 346 \$2 40.0 \$2 40.0 \$3 40.0	15 5 12 37 5 12 29.3 12 10 9 1 52 1 3 1 2 0 0 1 2 1 2 1 3 3 2 0 0 1 2 1 2 1 3 3 3 4 28 6 3 4 1 2 7 3 4 10 9 3 4 28 6 3 4 1	00 \$2 00 \$2 00 \$1 00 \$1 1 3-4 77 3-4 70 0 \$1 3.3 5-6 23 1 5-6 35 0 \$1 1 1 10-12 0 0 \$1 1 1 10-12 15 4 10 12 0 0 \$1 1 1 10-12 15 4 10 12 0 0 \$1 1 1 10-13 15 4 10 12 0 0 \$1 1 1 10-13 15 4 10 12 0 0 \$1 1 1 10-13 15 4 10 12 0 0 \$1 1 1 1 10-13 15 4 10 10 10 10 10 10 10 10 10 10 10 10 10
7-9 13 9 7-9 11 7-9 7-7 7 9 12 3 8 10-12 0 9 10-12 9 9 10-1 2 3 8 10-12 0 9 10-12 9 9 10-1 2 3 8 10-12 0 9 10-12 9 9 10-1 2 3 8 10-12 0 9 10-12 9 9 10-1 3 1 3 8 8 8 10 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	13 6	20 5-6 00 5-6 267 30 7-9 111 7-9 200 100 10-12 33 3 10 12 33 3 5 5 4 11 5 5 4 11 5 5 5 5 5 5 5 5 5 5 5
15	57 1 \$2 100 0 7	21 N-3 N2 14 26 \$2 37 \$2 00 12 105 3-4 148 34 00 77 5-6 185 5-6 133 87 79 296 74 603 79 012 148 1012 133 26 \$3 18.5 \$23 133 39 N-27 4= 15 30 \$2 37 4= 15
34 25 0 56 17 5 74 20 0 10 12 0 0 13 0 0 13 0 0 14 33 3 3 34 0 0 5 5 33 3 5 6 0 0 7 4 0 0 7 4 0 0 10 12 0 0 10 12 100 0 213 0 0 10 12 100 0	N# 11 N 20 N 4 N	52 34 214 3-4 74 96 5-6 143 5-6 11 1 17 7-9 35,7 79 481 161 10-12 286 1012 322 43 213 00 213 74 46 N- 28 N- 27 71 42 12 N 42 47 71 42 12 N 42 47 71 5-6 12 N 5-6 93 143 5-6 12 N 5-6 93 144 79 167 9 419
\$2,006 4 34,006 56,000 79,000	62 200 52 235' 52 43' 52 64 400 34 235 34 71 34 2	4 3 5-6 12 5 5 6 9 3 7 12 14 7 9 16 7 9 4 19 15 7 10 12 37 5 10 17 2 5 6 14 1 9 15 7 10 12 37 5 10 17 2 5 6 14 1 9 10 10 10 10 10 10 10 10 10 10 10 10 10
20° (3.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	N= 10 N= 17 N= 14 N= 12 N= 12 N= 14 N= 14 N= 12 N= 14 N= 12	0 0 413 18 2 413 8.0 5 Na 33 Na 25 8 0 + 52 67 4 62 64 20 5 -6 200 5-6 85 75 7-9 16.7 7-9 28 25 10-12 6.7 10-12 25 25 25 10-12 6.7 10-12 25 25 25 26 27 10-12 25 25 26 27 10-12 25 25 26 27 10-12 25 25 26 27 10-12 25 25 26 27 10-12 25 26 27 10-12 25 27 27 28 27 28 27 28 27 28 27 28 27 28 27 28 27 28 28 28 28 28 28 28 28 28 28 28 28 28
45°	E 50°	55°

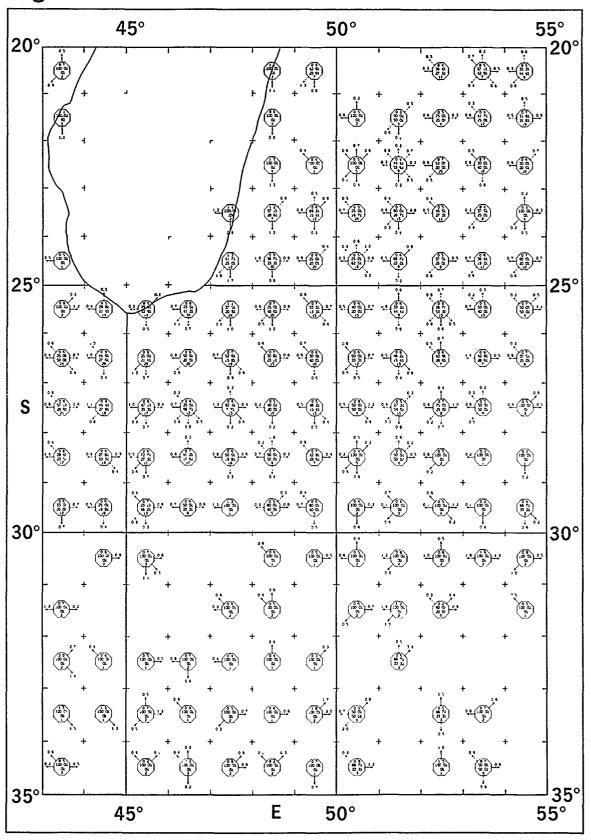
		35°		40°	
20°			0 1 52 8.6 1 52 16.9 1 52 22.0 1	¥2 23 0 \$2 33.3 \$2 36.2	20°
_ `	•	3-4 00 3-4 26.1 5-6 50.0 5-6 21.	8 3-4 31.4 3-4 23.2 3-4 25.1 4 5-6 22 9 5-6 26.8 5-6 19.7	3-1 18.3 3-1 23.5 3-1 21.3 5-6 27.0 5-6 25.5 5-6 11.9 7-9 22.2 7-9 3.6 7-9 23.1	3-4 0.0 9-6 0.0 7-9 100.0
	WAVE HEIGHT - FREQUENCIES	7-9 \$50.0 7-9 21.0 10-12 0 0 10-12 1.6 213 0.0 213 3.6 N= 21 N= 50	8 10-12 11.4 10-12 6.3 10-12 9.0 6 ≥13 11.4 ≥13 2.1 ≥13 2.3		0-12 0.0 213 0.0
	PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE - DEGREE QUADRANGLES.	\$2 25.0 3-4 35.5 5-6 15.	6 T	「≦2 23.5	≨2 0.0 3-1 0.0
	Height Percent	7-9 15.7 17-12 5.1	4 7-9 33 3 7-9 25.7 7-9 22.6 1 10-12 10 0 10-12 6 6 10-12 5.8	7-9 27 5 7-9 22.9 7-9 18.8	5-6 100 0 7-9 0.0 0-12 0.0 ≥13 0 0
	3-4 200	- 4 N= 39	9+ N= 30+ N= 408+ N= 155 0+ £2 15.8+ £2 17 0+ £2 19.7+	+ N= 51 N= 70 + N= 16 + \$2 20.4 \$2 22.6 + \$2 42.9 +	N= 2 £2 66 7
	5-6-300 7-9-200	5-4) 29.5 5-6 24.6 7-9 19.5	5 5-6 20 5 5-6 16.3 5-6 21.3 7 7-9 27 5 7-9 28 4 7-9 28.7	3-4 18.5 3-4 18 9 3-4 14.3 5-6 33 3 5-6 24.5 5-6 14.3 7-9 14 8 7-9 18.9 7-9 28 6	3-4 33.3 5-6 0 0 7-9 0.0
	10-12 100 ≥13 100 N ≈ 1363	10-12 6.0 313 1.1	6 ≩13 4.4 ≩13 5.7 ≩13 0.0 1 N= 273 N= 264 N= 122 L	≥13 1.9 ≥13 5.7 ≥13 0.0 N= 54 N= 53 N= 7	0-12 0 0 213 0 0 N= 3
	EXAMPLE: 30 0% OF ALL WAVE HEIGHTS WERE IN THE RANGE	3-1 13 5-6 28.0	2 3-4 16.5 3-4 24.0 3-4 23.4 5 5-6 17.8 5-6 20.9 5-6 23.4	52 15 9 62 20 0 52 12.5 7 3-4 11.1 3-4 24.0 3-4 12.5 5-6 33 3 5-6 4.0 5-6 25 0	≨2 66 7 3-4 0 0 5-6 0 0
	5 - 6 FEET, N = OBSERVATION COUNT.	7/9 28 (10/12 11.4 ≱13 4.4	6 7-9 33 5 7-9 28 7 7-9 25.6 0 10-12 12 4 10-12 8 5 10-12 7 8	7-9 25 1 7-9 28.0 7-9 50.0	7-9 33 3 0-12 0 0 ≩13 0 0
	WAVE DATA FOR THESE TABLES WERE SELECTED FROM THE HIGHER OF SEA OR SWELL WHEN BOTH	. 123 9	1+ N= 394 N= 129 N= 64 4+ \$2 11 7+ \$2 16.5+ \$2 23 3+	N= 63 N= 25 N= 8 ≤2 83 ≤2 25.0 ≤2 35.8 ± 3-4 33.3 3-4 0.0 3-4 15.8	N= 3 £2 11 8 3-4 29 4
	WERE REPORTED.	5-6 B.J 5-6 18.1 7-9 25.0 7-9 27 10-12 6.3 10-12 12.0	8 5-6 26.2 5-6 14.7 5-6 18.3 1 7-9 27 6 7-9 28 4 7-9 26 7	5-6 16.7 5-6 12.5 5-6 21.1 7-9 8.3 7-9 50.0 7-9 26.3	5-6 23 5 7-9 29.4 0-12 5.9
25°		≩13 6/3 ≩13 8 1 N= 410	5 ≩13 62 ≩13 1.6 ≩13 50 0 N= 145 N= 109 N= 60	≥13 15.7 ≥13 00 ≥13 00 N= 12 N= 8 N= 19	213 0.0 N= 17 250
23	7 \$2 \$0 0 7 \$2 4.25 3-4 25.0 3-3 23.6 5-6 0.0 5-6 55.6	3-4 20 9 3-4 13.5 5-6 21 6 5 6 20.6	9 3-4 16 6 3-4 14.8 3-4 16 7 9 5-6 22 8 5-6 19.8 5-6 16 7	52 143 52 83 82 4.5 3-4 250 3-4 333 3-4 273 5-6 00 5-6 83 5-6 227	3-4 19.0 5-6 23 8
	7-9 25.0 7-9 8 3 10-12 90 10-12 5 6 ≩13 00 ≩13 2 8	7-9 29 8 7-9 31,5 10-12 12 8 10-12 12,5 £13 7 1 ≥13 9,5	3 10-12 15 9 10-12 16 0 10-12 7 1	7-9 28 6 7-9 25 0 7-9 31 8 10-12 25 0 10-12 16.7 10-12 4.5 1 2.3 7 1 213 8 3 213 9.1	7-9 38 1 0-12 4 8 413 9 5
	N= 8 N= 72 \$2 68 4 \$2 13 5 3-4 \$2 13 5	\= 282 N= 30: ≤2 88 ≤2 6: 3-4 165 3-4 13:6	2+ N= 145+ N= 81 N= 42 8+ 12 100+ 12 152+ 12 120+	N= 28 N= 24 N= 22 = 2 87 = 2 190 + 52 109 + 3-4 13 0 3-4 23.8 3-4 25 5	N= 21 £2 12 2 3-4 16 3
	5-6 10.5 5-6 23.4 7-3 10.5 7-3 27.5 10-12 0.0 10-12 13.5	\$ 6 17 3 5-6 23.3 7-9 30 8 7-9 33 5 10-12 16 0 10-12 11.0	7 5-6 16 4 5-6 21 2 5-6 32 0 9 7-9 32 7 7-9 27.3 7-9 36 0	5-6 30 4 5-6 9 5 5-6 7 3 7-9 34 8 7-9 28 6 7-9 40 0	5-6 15 4 7-9 33 3 0 12 11 4
	≥13 00 ≥13 5.3 N# 9 N= 171	≥13 105 ≥13 11.0 N= 399 N= 110	0 ≩13 45 ≩13 30 ≩13 00 B_ N≈ 110_ N= 33_ N≅ 25_	≥13 43 ≥13 48 ≥13 55 N= 23 N= 21 N= 55	±13 11 4 N= 123
	ົ້ ≨⊋ 13 ⁷ 7 ¯ ≨2 −7 6″ 3~1 70 5 −3-4 13 ≥ 5~6 \$6.9 −5-6 19.6	\$2 85 \$2 8.5 3-4 11.3 3-4 15.6 \$6 17.0 5.6 17.6	6 3-4 14 6 3-4 10 8 3-4 6 8	3-4 11 1 3-4 20 0 3-4 11 2 5 6 20 6 5-6 13 9 5-6 18 1	\$2 5 4 3-4 11 3 5 6 15 3
S	7+8 23.2 7-9 31.4 10+12 6 3 10-12 17 7 213 7 4 213 10 4	7-9 31 9 7-9 34.9 10-12 18 4 10-12 13.6 \$13 12 8 \$13 10.5	9 7-9 29 2 7-9 37.8 7-9 35 6 8 10-12 20 8 10-12 10.8 10-12 20 5	7-9 30 2 7 9 29 1 7-9 30 3	7-9 35 5 0-12 17 7 ≥13 14 9
	" \$2 00 + \$2 55 + \$2 4.3 1	N= 141 %= 104	9 N= 48 N= 37 N- 73 8 + 62 89 + 62 86 + 62 125 +	N= 126 N= 165 N= 18H \$2 114 \$2 89 + 52 99 +	N- 203
	5-6 03 5-6 18,7 5-6 16 3 7-9 66,7 7-9 31 3 7-9 35.9	5 6 15 8 \$-6 17 6 7-9 34 4 7-9 35 5	4 5-6 14 3 5-6 16.5 5 6 17 5 5 7-9 31 5 7-9 31 7 7 9 25 0	5-6 14 6 5-6 11 3 5-6 12.3 7-9 29 1 7-9 31 4 7-9 27 0	5 6 13 2 7-9 36 3
	10-12 0.0 10 12 13 7 10-12 18.7 213 0.0 213 14.6 213 12.4 NE NE 438 NE 209	10-,2 19 7 15 12 12 5 ≥13 9 3 <13 12 5 N= 183 N= 15	5 €13 16.7 ≩13 15.1 ≷13 13.3 2. N= 168, N= 139 N= 120.	10-12 15 2 10 12 16 9 10-12 23 4 1 ±13 20 3 ±13 15 7 ±13 11 7 N= 158 N= 159 N= 111	13 12 1 14 91
	\$2 86+ 22 55+ 52 63+ 3-1 11 3-4 13 6 3-4 10 1 76 15 1 5-6 15 6 5 6 13 4	" ≦2 37" 52 2: 3-4 67 3-4 13 6 56 19 4 56 14 9	3 5-4 79 3-4 74 3-4 63	52 40	\$2 14 3 3-4 4 8 5 6 14 3
	7-9 32 0 7-3 26 1 7-9 31 1 5-12 17 2 10-12 23 1 21 17 12 1 2 1 2 1 2 1 2 1 2 1 2 1 2	7 9 27 6 7-3 33 1 10-12 23 1 10 12 19 9 213 19.4 213 16 1	3 7-9 28 9 7-9 28.4 7-9 32 i 5 10-12 20 2 10-12 21.0 10-12 20 i	7 + 3h 5 79 3 ₁ 3 7-3 34 2	7 9 42 9 0 12 16 7 213 7 1
30°	N= 338 N= 398 1 238	%= 134 %= 8	7 N= 114 N= 176 N= 159 7 = 2 51 = 2 66 = 2 3 3	N= 126 N= 94 N= 76 52 68 52 70 52 2.8	30°
	3.4 10.2 3.4 6.7 3.4 9.5 5.6 13.9 5.6 10.5 5.6 9.5 7.4 31.9 7.9 37.1 7.4 36.9	3-4 8 4 3-4 11 5 5-6 14 5 5-6 14 6 7-9 30 5 7-9 34,6	5-6 18 4 5 6 18 9 5-6 24 7 5 7-9 28 5 7 4 TO 2 7-3 28 6	3 4 11 9 3-4 11 6 3-4 11 1 5-6 15 3 5-6 14 0 5-6 19 4 7 4 30 5 7 9 32 6 7 9 38 9	34 77 56 to 4 7-9 43 6
	10-12 18 6 10-12 21 0 1J-12 17 9 #13 21 8 #13 20 0 #13 22 6 N= 285 N= 105 N= 84	10-12 13 8 10 12 16.1 413 21 4 813 18 9 N= 131 N= 135	5 \$13 22 8 213 14 2 \$13 11 7	10-12 27 1 10 12 27 9 10 12 22 2 2 13 8 5 213 7 0 213 5 6 N = 59 N - 43 N = 36	0 12 17 9 ∉13 10 3 N= 39
	- \$2 00+ \$2 35+ \$2 50+ 3-4 103 3-4 54 3-4 92	5-2 51 52 11 3-4 77 34 10 6	3+ <u>52 38+ 52 00+ 52 37</u> + 4 3-4 75 34 122 3-4 3?	+ s ₂ 77 + s ₂ 3, + s ₂ 42 + 34 7 34 83	52 h 1 7 3-4 3 0
Ì	5-6 10.3 5-6 8,7 5-6 12 1 7 4 31 7 7-9 29 5 7 9 25 5 10 12 19 8 10 12 23 1 10-12 23 1	5-h 11 1 5-6 15 6 7-9 35 0 7 9 26 5 10-12 23 1 10 12 24 7	7-9 340	5-6 5-8 5-6 6-3 5-6 4-2 7-4 4-3 7-9 46-9 7-4 29-2 10 12 23-1 10 12 25-0 15-12 37-5 1	5-6 9 1 7 + 48 5 0 12 24 2
	*13 278 213 289 213 248 N= 126 N= 173 N= 141 T 52 28 52 81 52 68	213 17 9 213 22 1 N= 117 N= 21	i ≥13 13 2 ≥13 12 2 ≥13 11 i 7 N= 53 N= 45 N= 27	613 15 4 613 94 613 16 7 N= 26 N= 32 N= 24	915 9.1 N= 3.3
	34 39 34 40 34 96 5-6 89 56 11 1 5-6 123	34 00 3-4 12 5 5-6 16 2 5 6 10 6	5 3-4 107 3-4 01 3-4 29 4 5-6 107 5-6 95 5-6 175	3 4 25 3 5-4 A1 3 4 3 4 5 6 7 4 5 6 24 5 5-5 10 3	3 4 2 h 5-+ * 3
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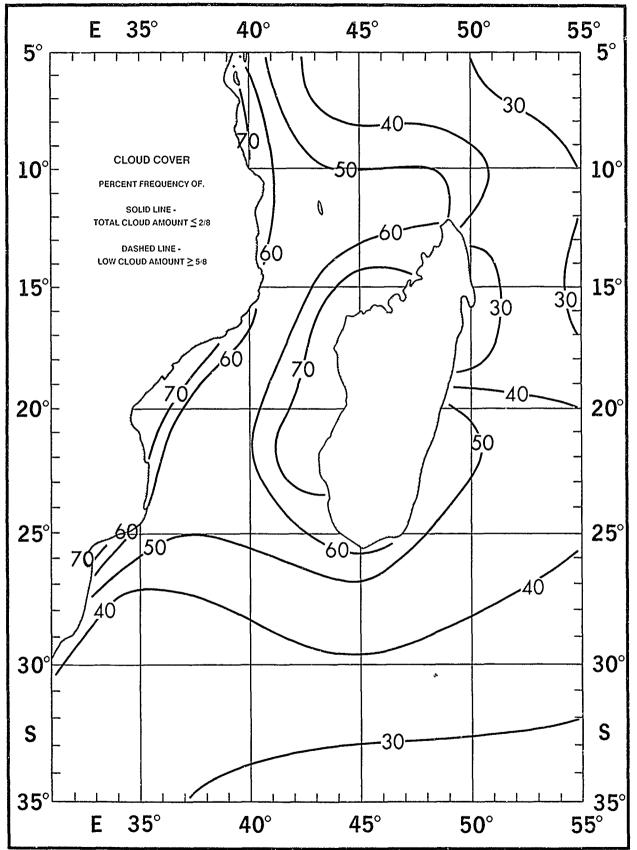


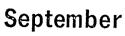




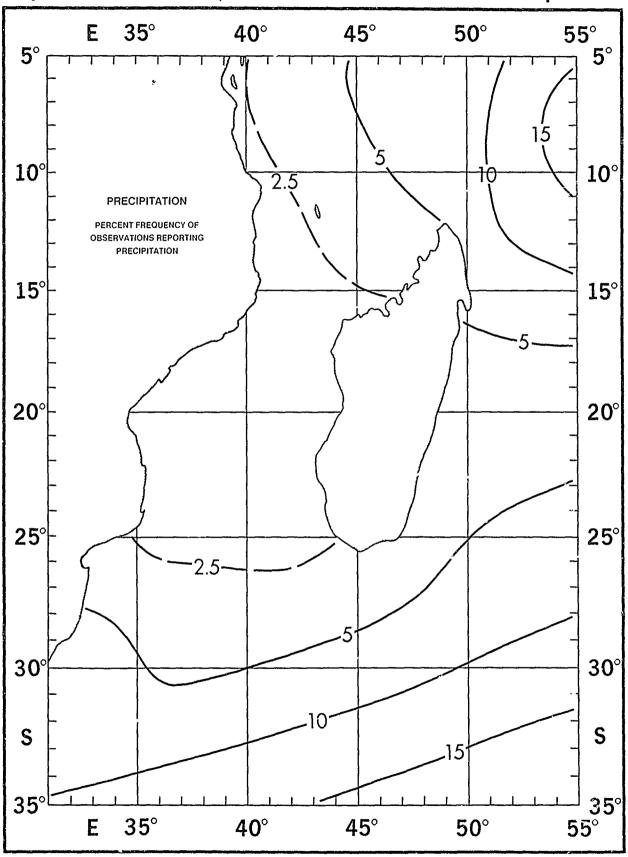


Clouds





Precipitation



| September | 35° | 40° | 5° | 60° | 5° | 60° | 5° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 6

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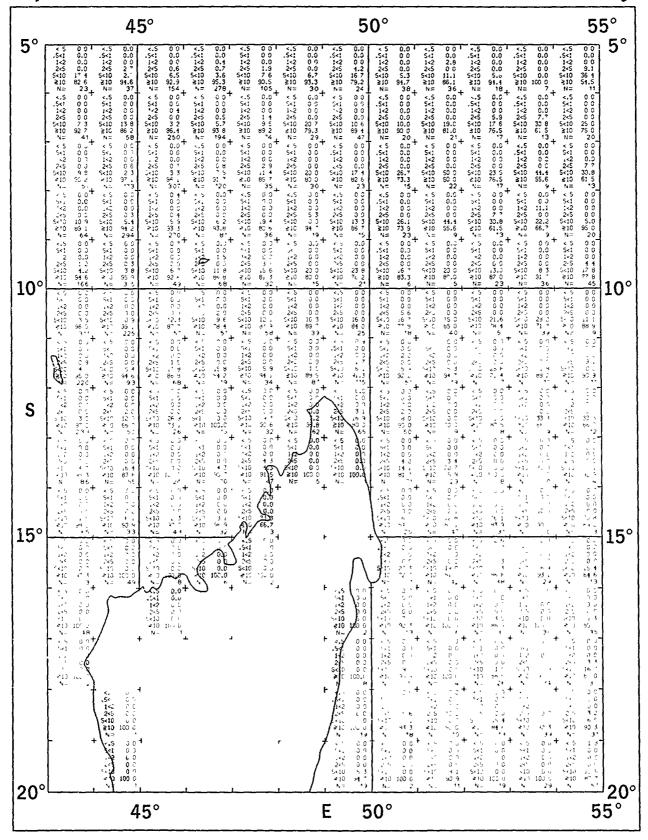
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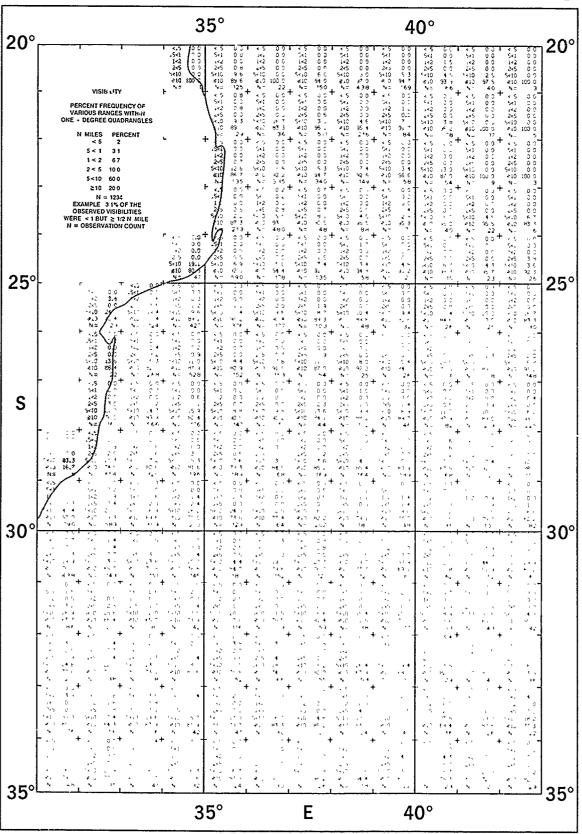
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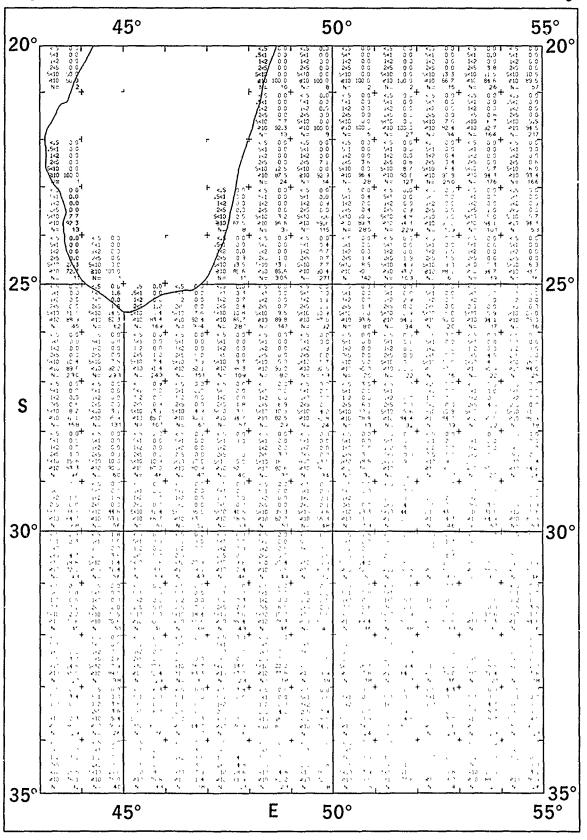
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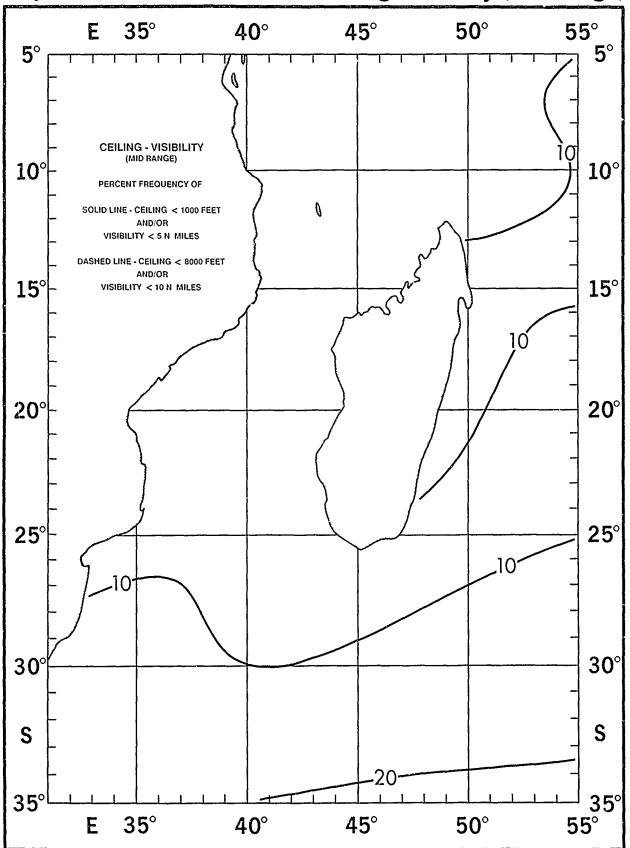






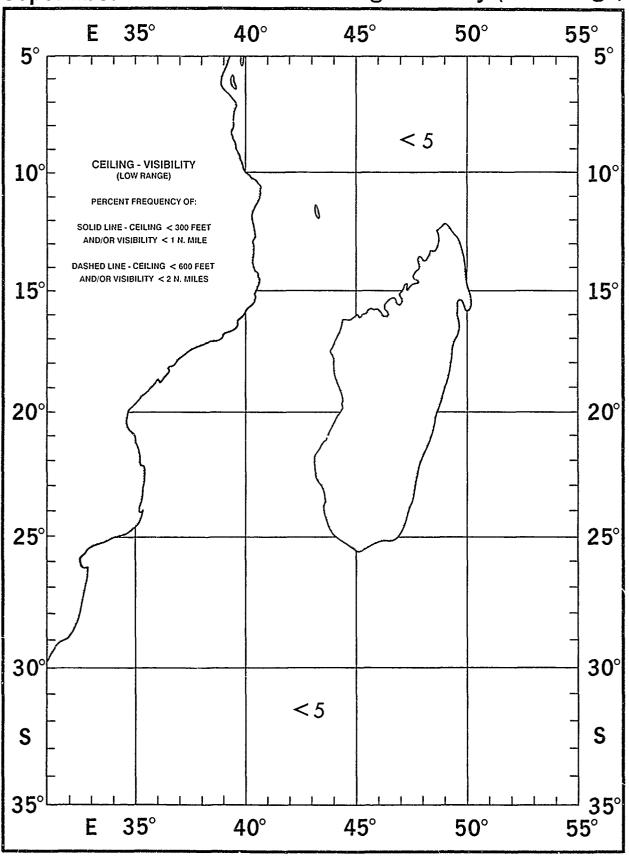


Ceiling - Visibility (Mid Range)



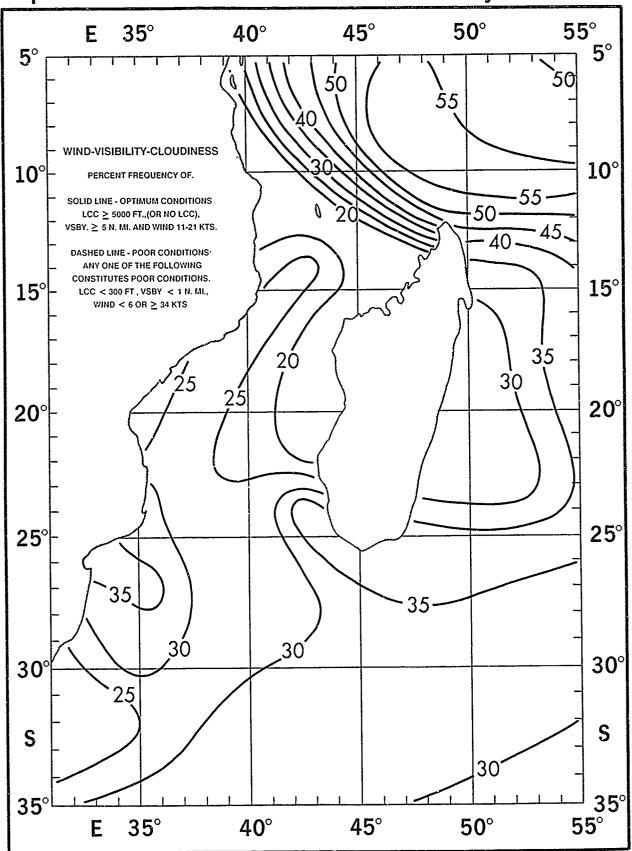


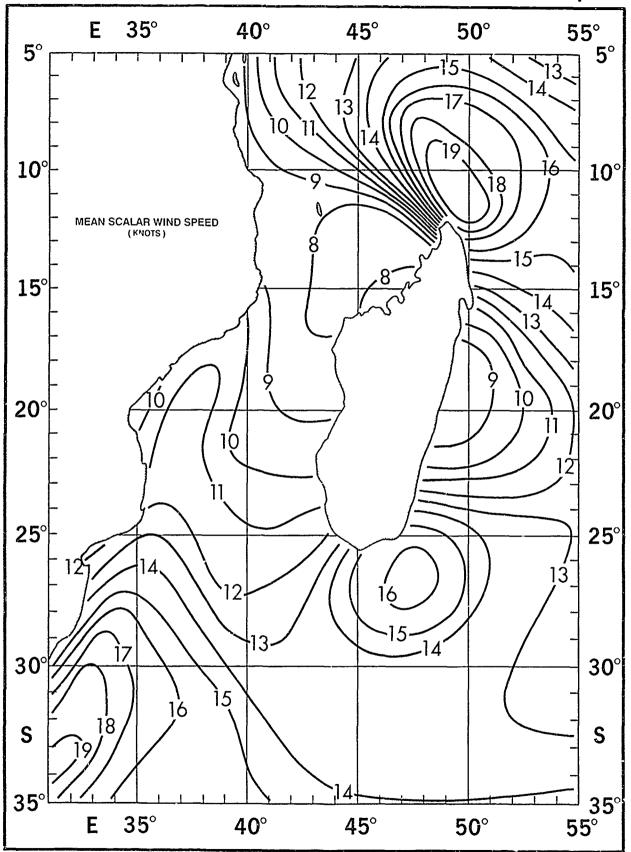
Ceiling - Visibility (Low Range)

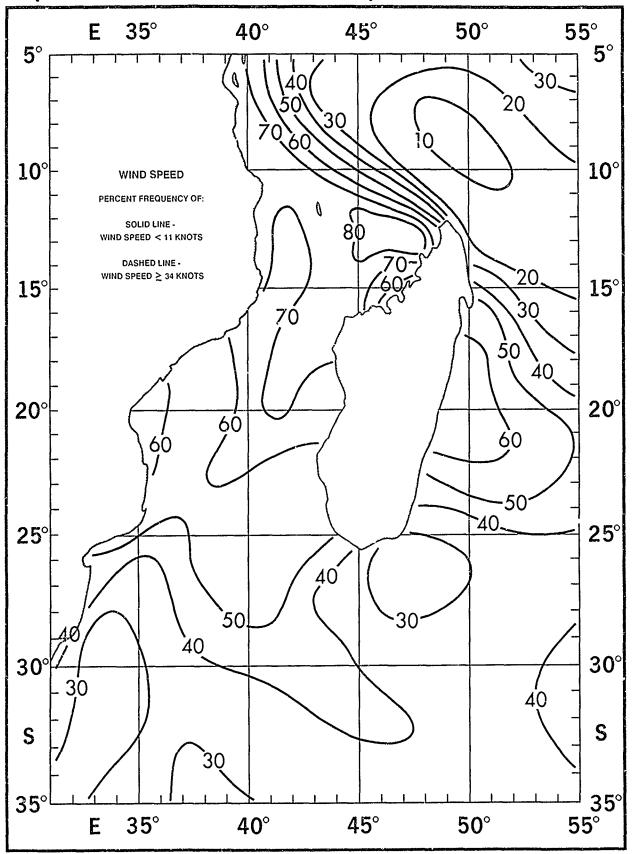




Wind - Visibility - Cloudiness

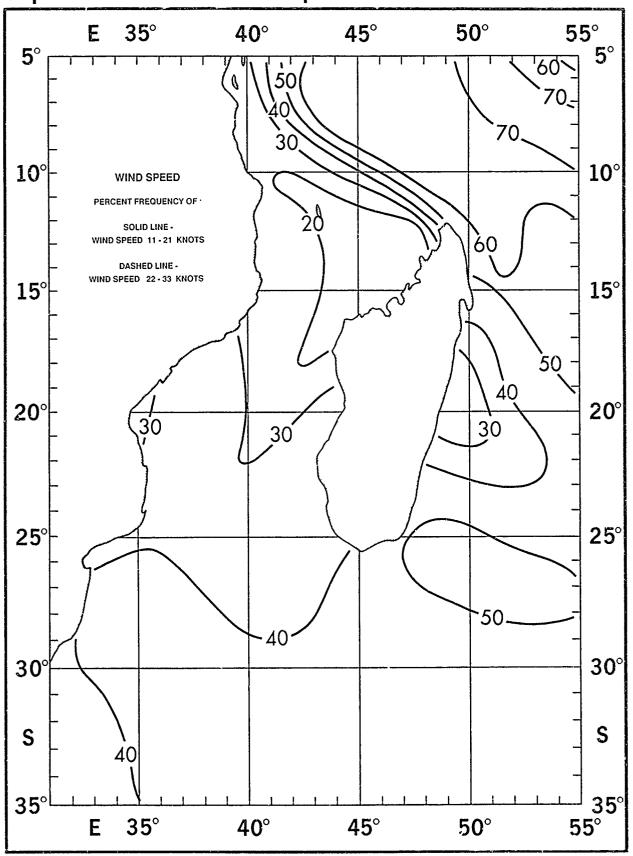


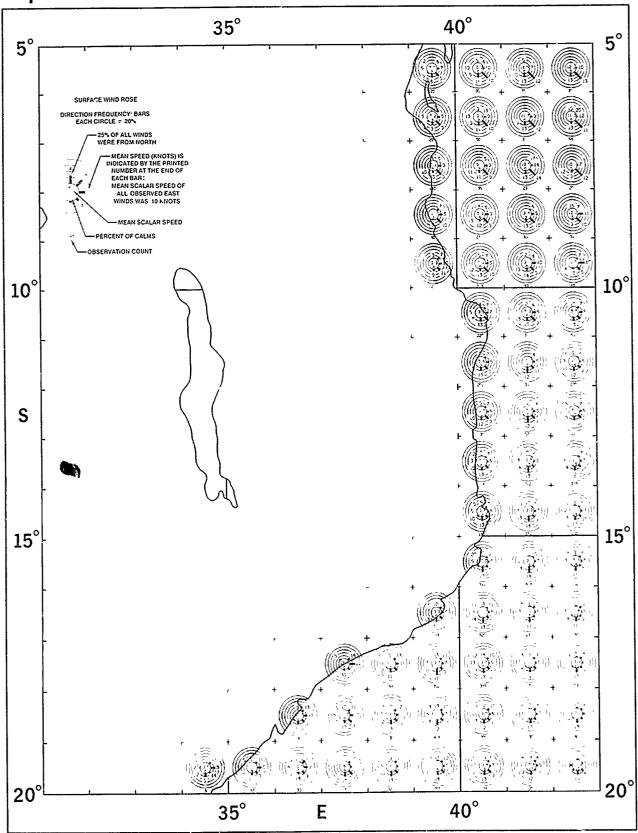


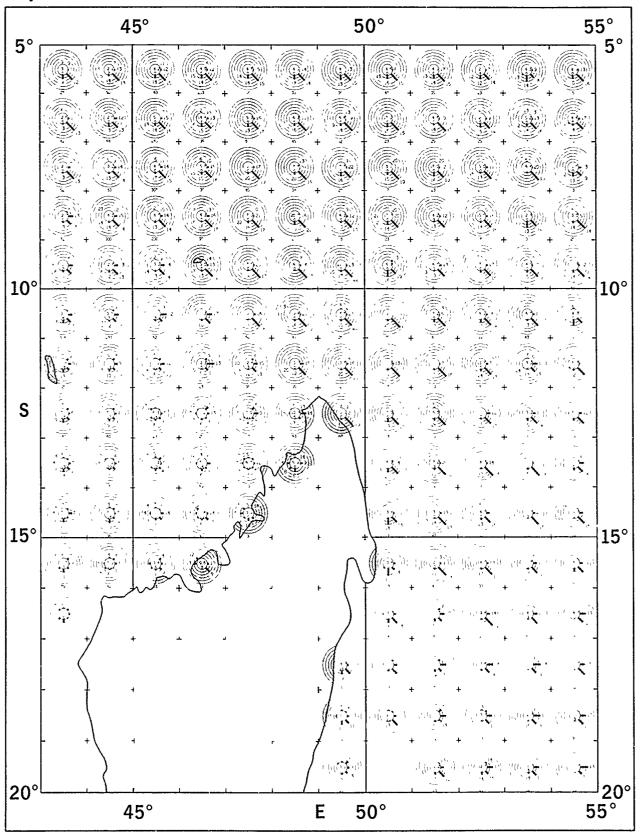


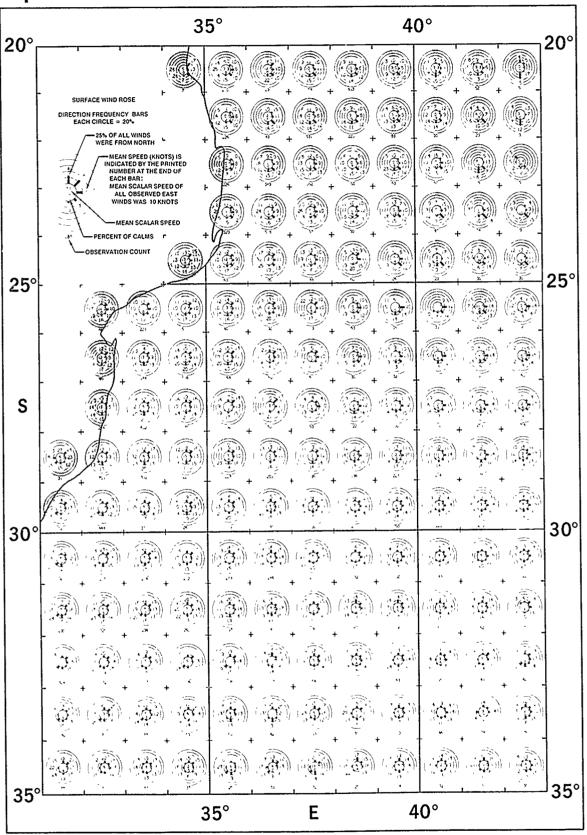


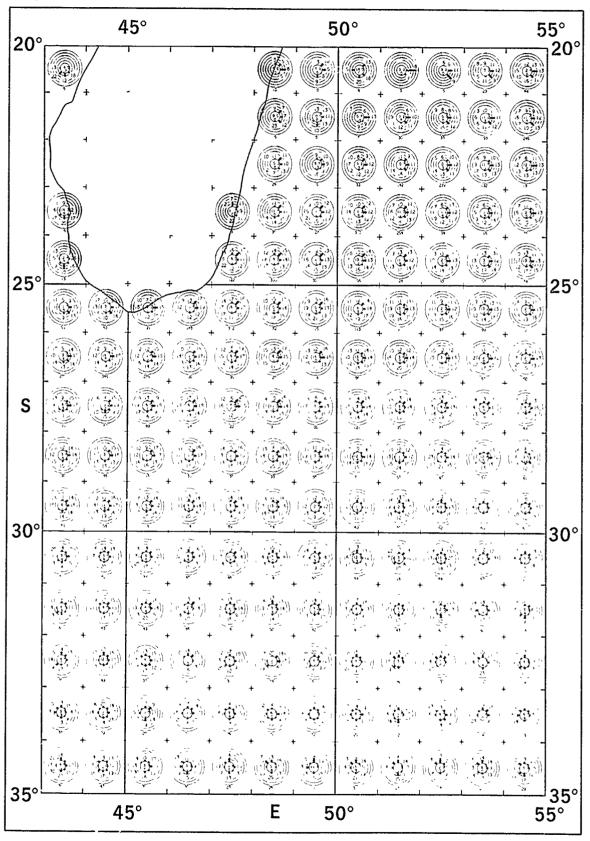
Wind Speed 11 - 21 and 22 - 33 Knots

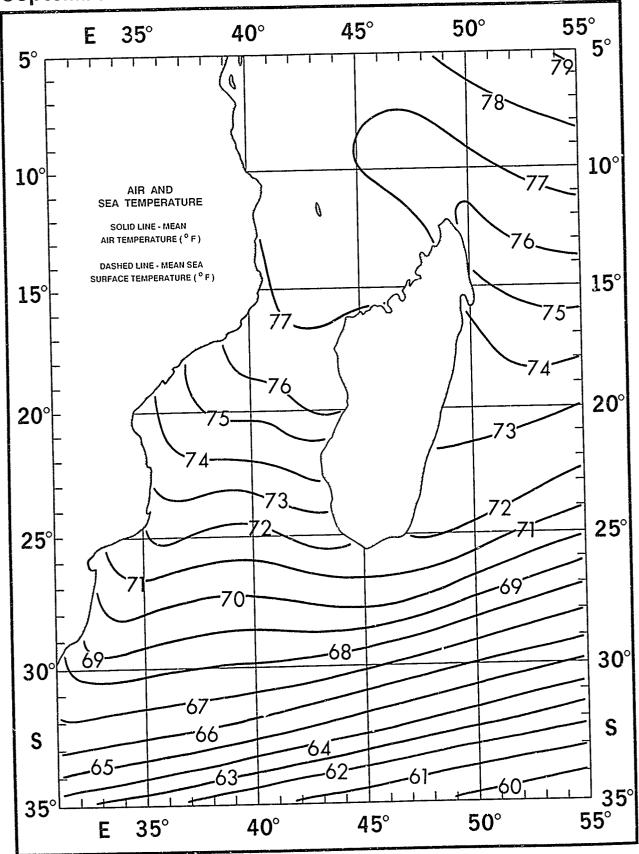


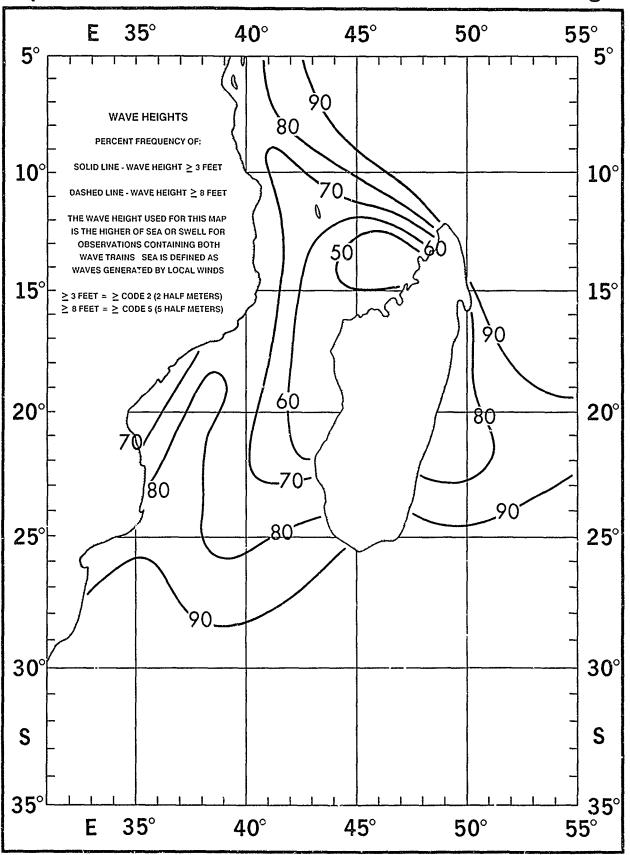


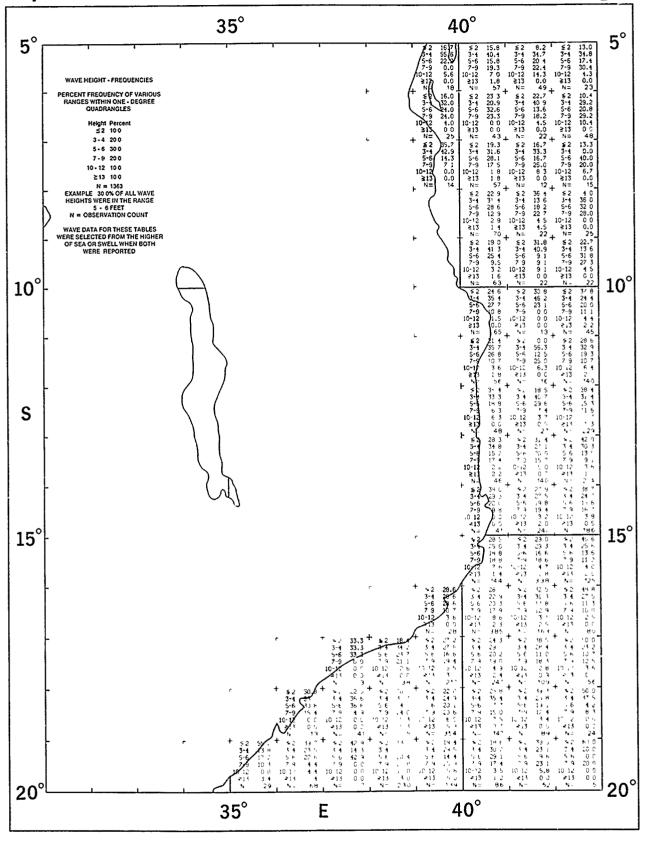




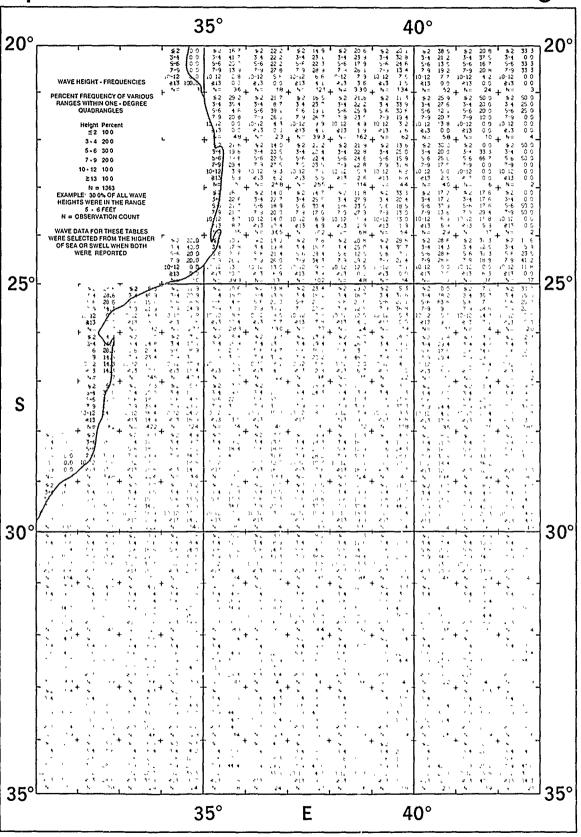


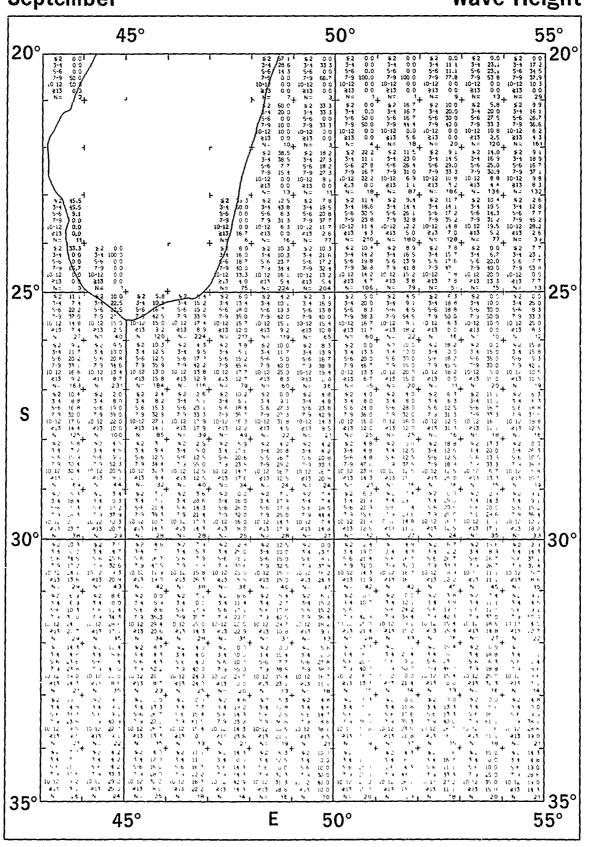


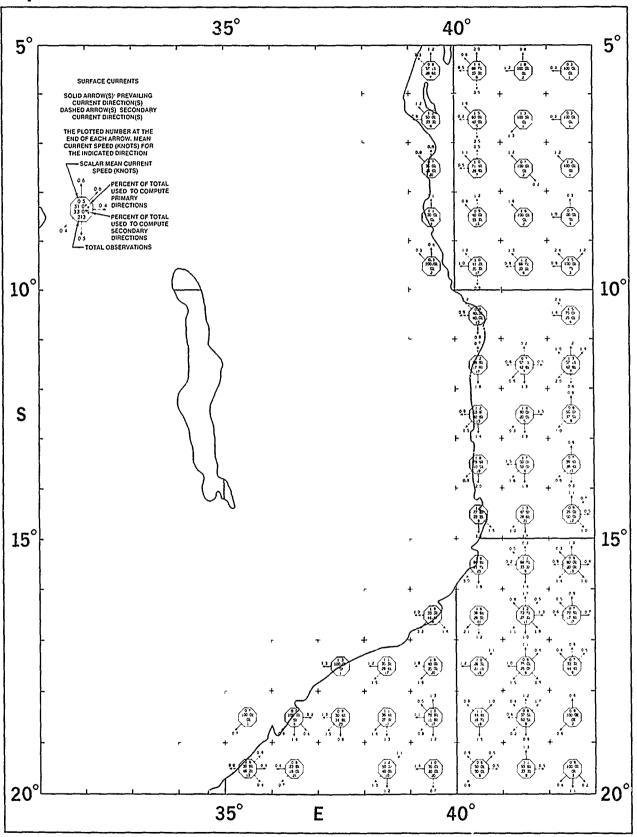


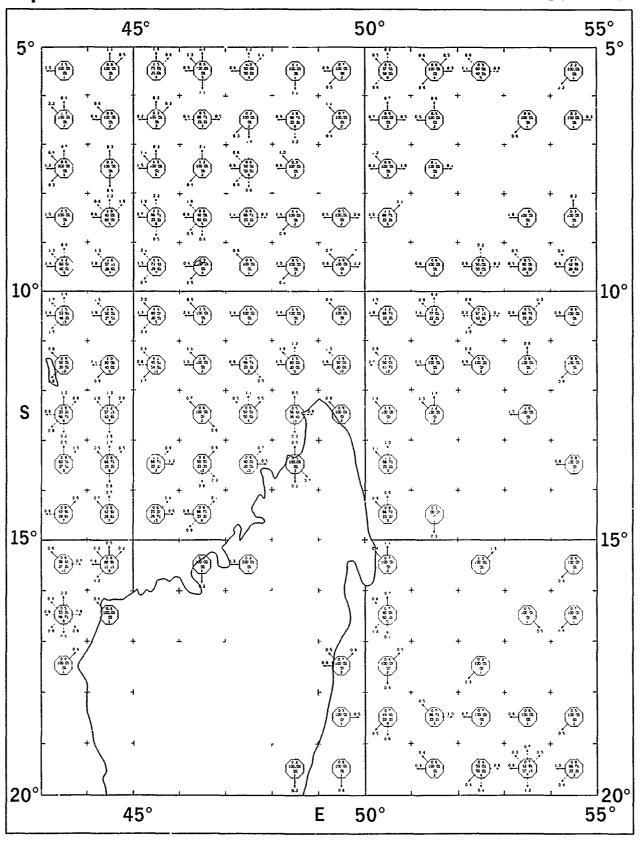


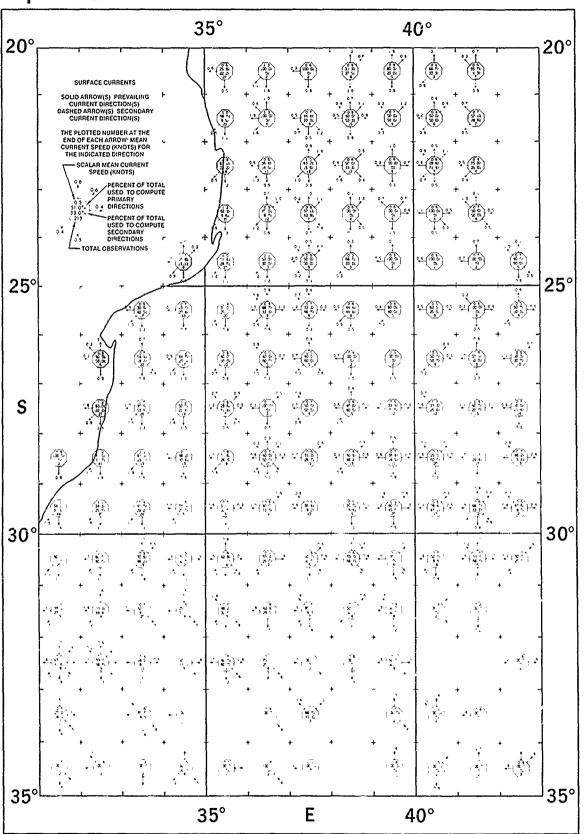
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	3-4 28 3	00 56 20 56 13 56 12 00 79 40 0 79 40 5 79 65 10 12 00 10 12 189 10 12 9	0 34 22 7 3-4 18 2 5 56 18 2 5-6 18 2 6 7 9 31 8 7-9 63 6
	N- 53 N= 34 N= 6 N3 0.0 213	P 52 100 0 13 81 213 6	37 N= 22 N= 11 1
	3 1 10 6 5 6 10 8 7-9 9 1 10 12 0 0 21* 0 0	3-4 00 3-4 18 4 3-4 25 0 3 4 9 5-6 9 7-9 40 10-12 00 10-12 00 10-12 00 10-12 00 10-12 00 10-12 00 10-12 00 10-12 00 10-12 00 10-12 10-12 10-12 10-12 10-12 10-12 10-12 10-12 10-12 10-12 10-13 1	7 6 12 7 6 7 7
	\$2 30 + + + + + + + + + + + + + + + + + +	NT 1 N- 13 N- 4 N- + \$2 00	
	56 07 74 00 10 12 00 213 0 0	\$2 0 0 5 52 42 9 4 52 103 5 4 52 4 54 54 54 55 55 6 00 5 6 00 5 6 00 5 6 9 74 54 55 575 5 6 00 5 6 00 5 6 00 5 6 9 74 53 57 5 5 6 00 5	3 34 138 34 74 5 56 69 56 185 6 79 414 79 51 9 3 10 12 24 1 10 12 14 8 8 8 23 69 215 74 21 N= 29 N= 27
	r − −r < > no1	H	21 N= 29 N= 27 2+ 42 212+ 52 87= 2 34 41 34 174 2 5 91 56 34 8 1 79 212 79 217
	3-4 0 0 0 5-6 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10-12 0 0 10 12 14 \$ 10 12 0 0 10-12 11 413 0 0 ≥13 0 0 ≥13 20 0 ≥13 11	1 10 12 36 4 10 12 13 0
	+ \sigma 0 0 4 + \sigma 0 0 0 + \sigma 10 0 0 - \sigma 0 0 0 - \sigma 0 0 0	34 273 34 41 34 00 34 20	9 N= 33 N= 23 5+ \$2 5 9+ \$2 77 0 34 235 3-4 154 0 5 294 5-6 25 0 0 7 9 234 7-9 25 0
	7 0 0 0 10 12 0 0 0 ext 0 0 0	≥13 00 ≥13 0 1 ≥13 0 0 ≥13 0	0 74 294 7-9 25 0 0 10 12 11 6 10-12 25 0 0 213 0 0 213 1 9
20°	45°	E 50°	16, N= 17, N= 52 20° 55°
L			

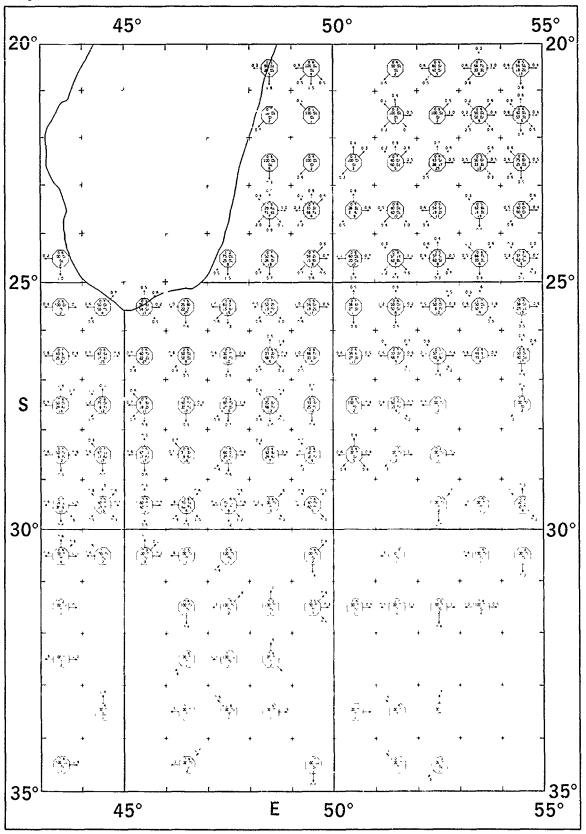






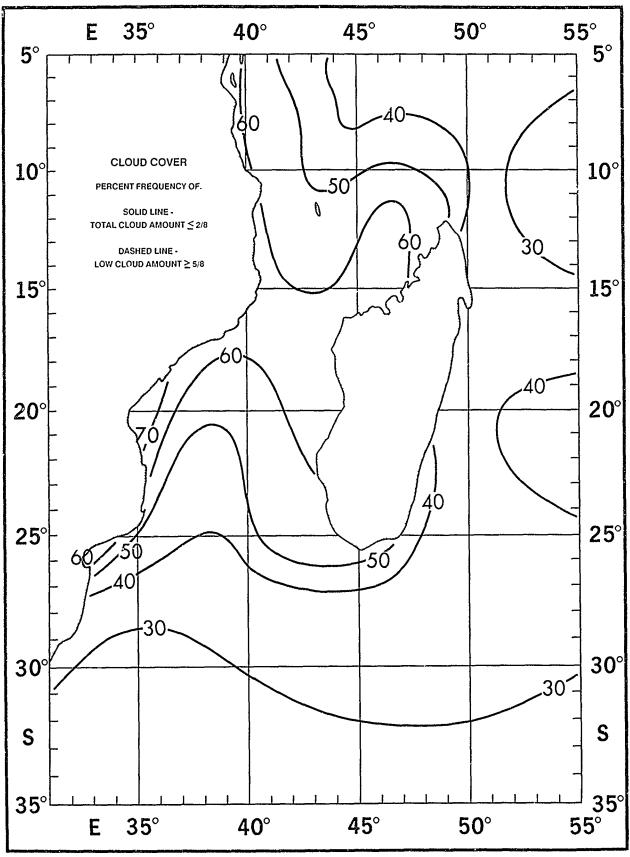






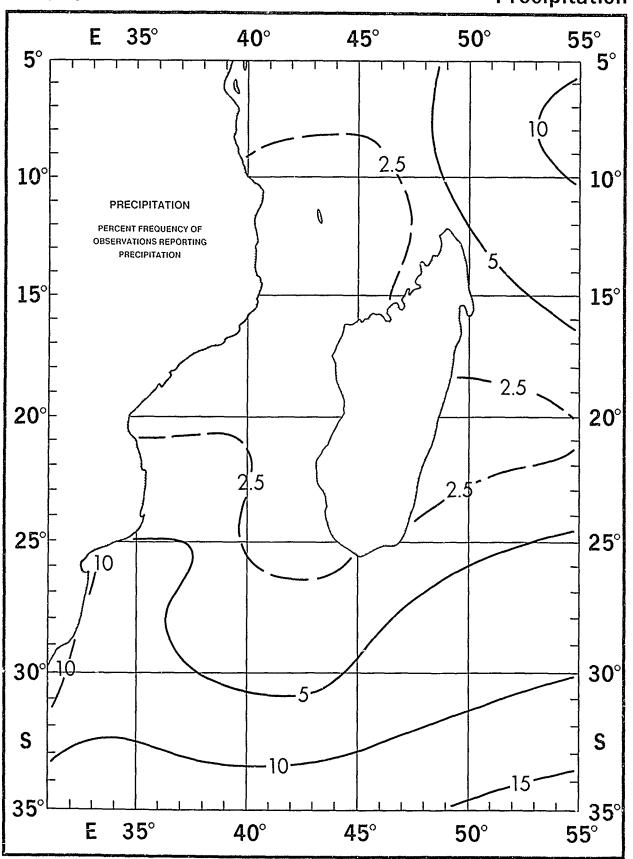


Clouds

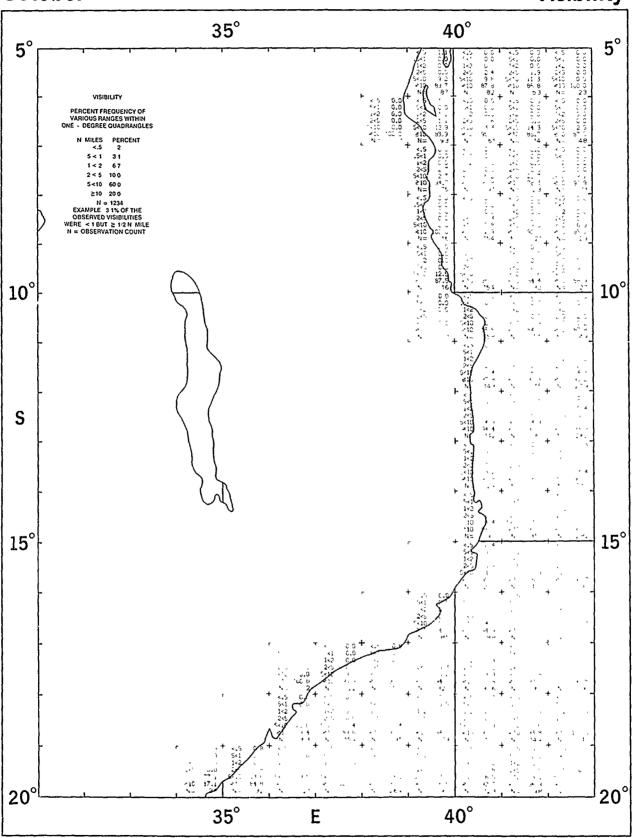




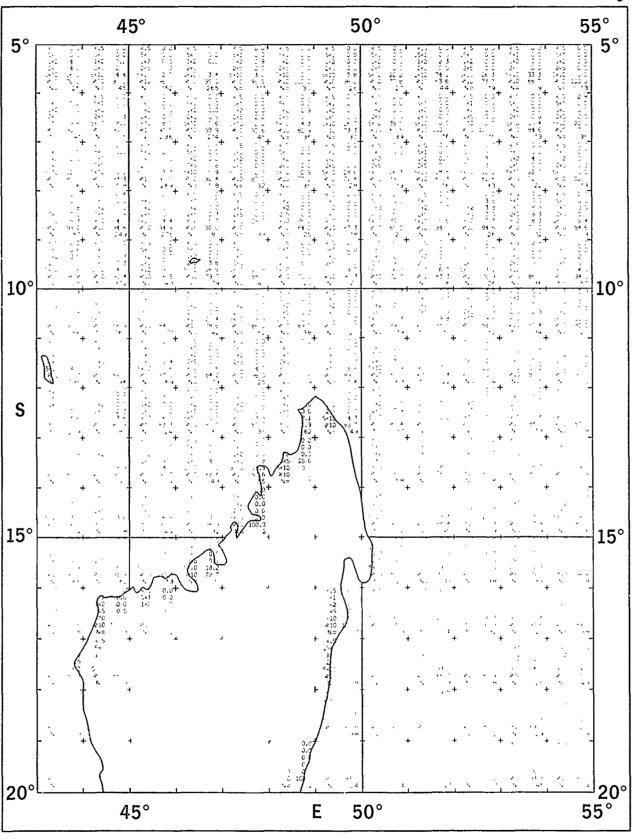
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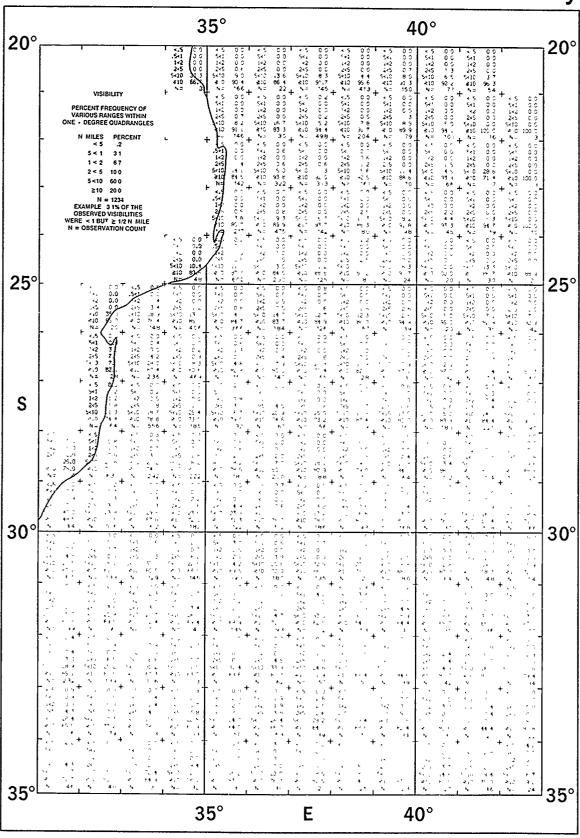


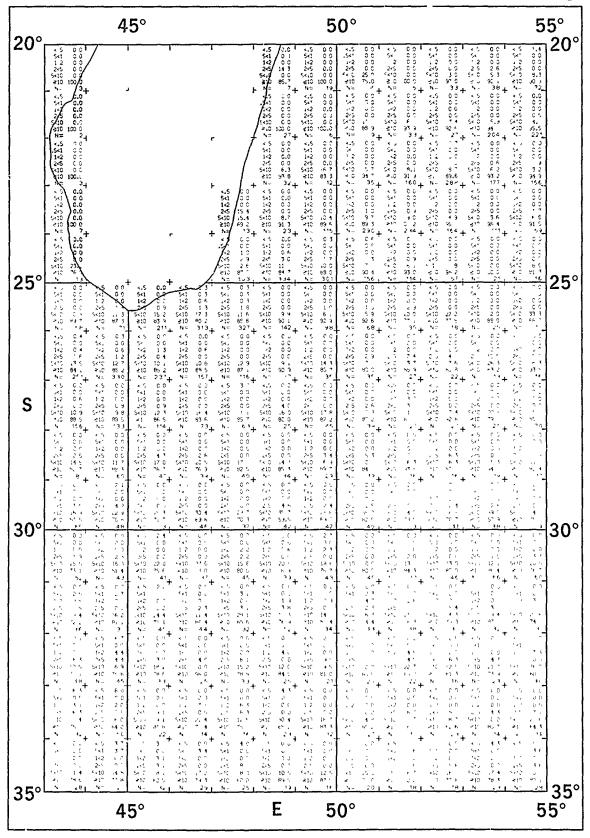


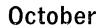


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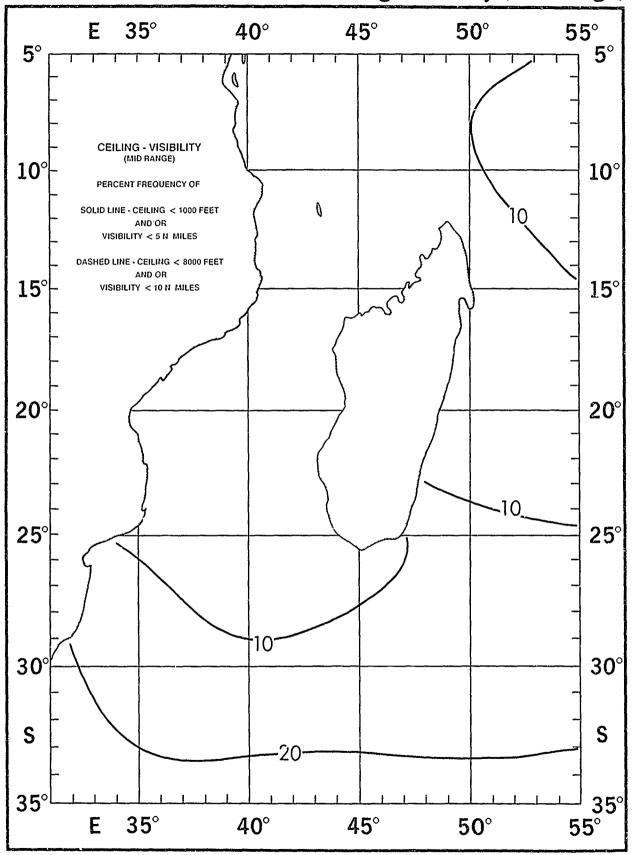






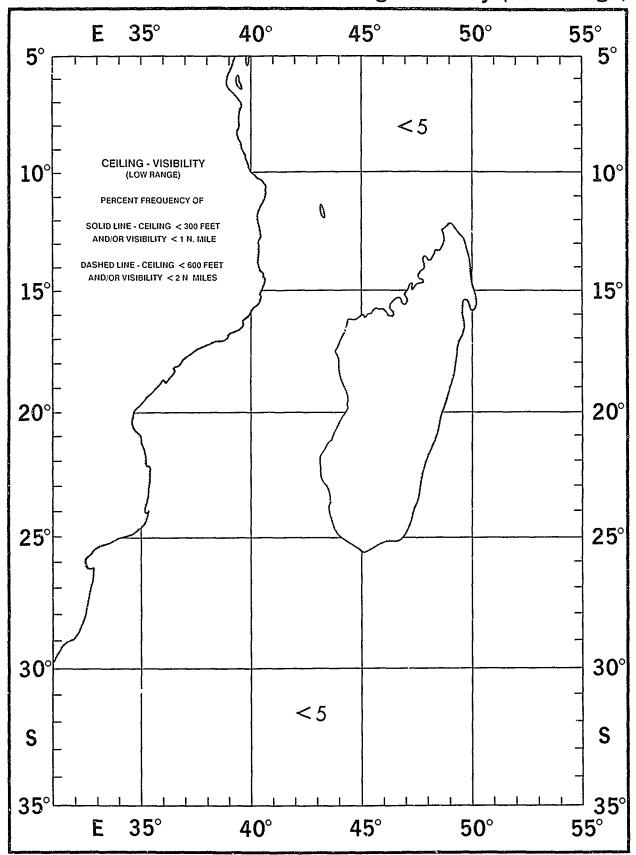


Ceiling - Visibility (Mid Range)

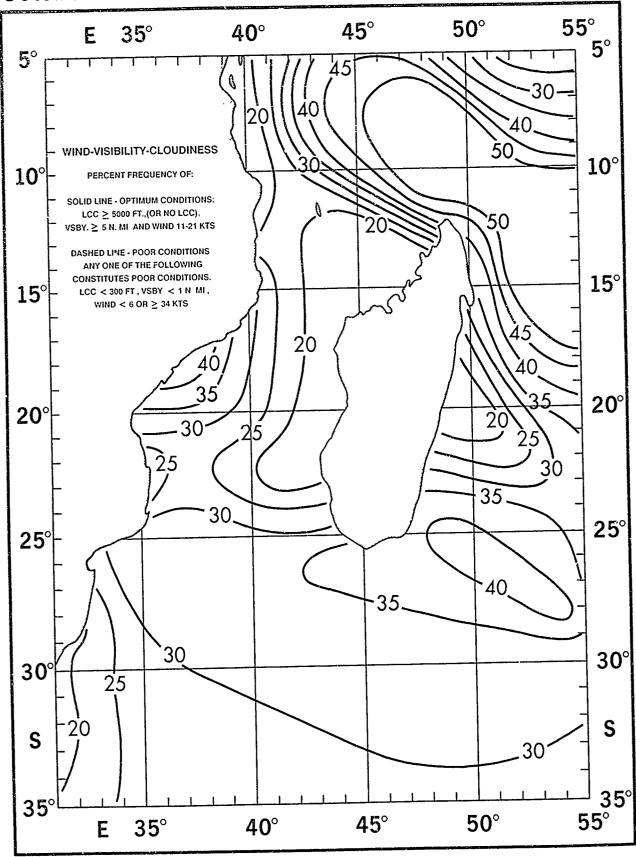




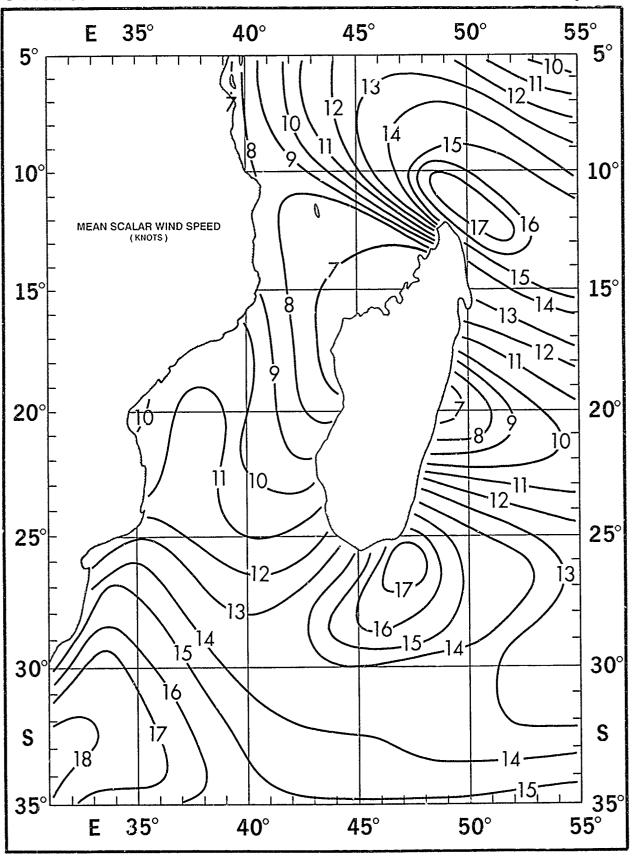
Ceiling - Visibility (Low Range)

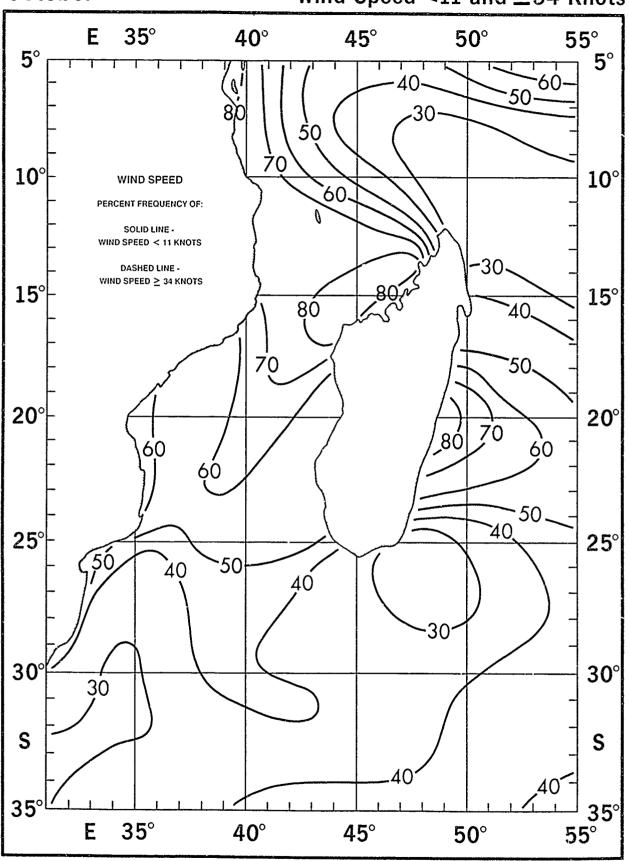


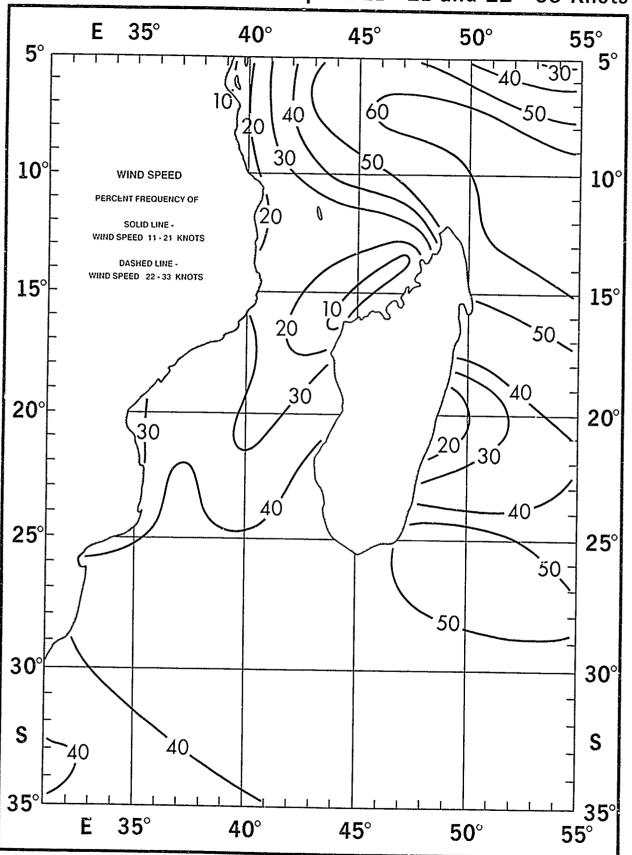
Wind - Visibility - Cloudiness

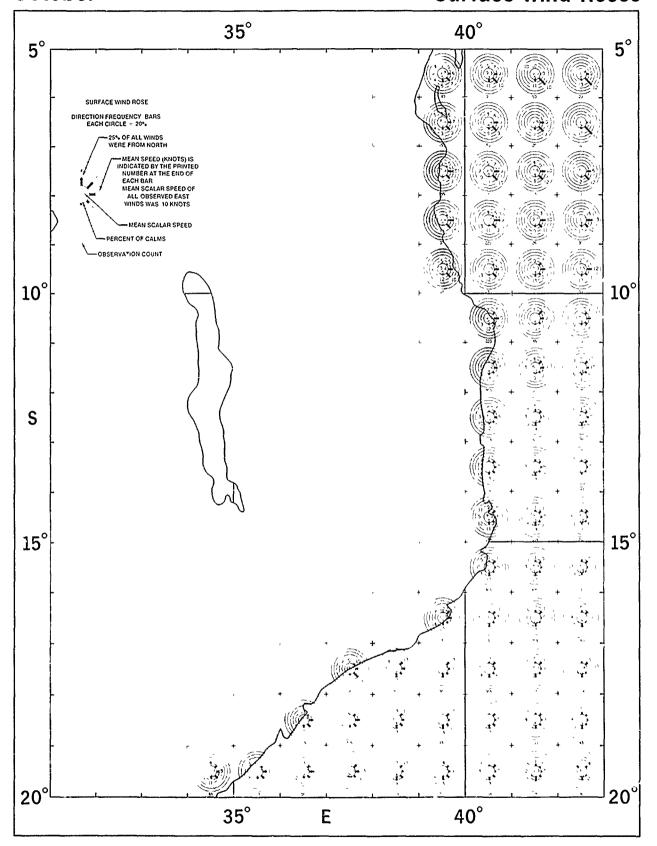


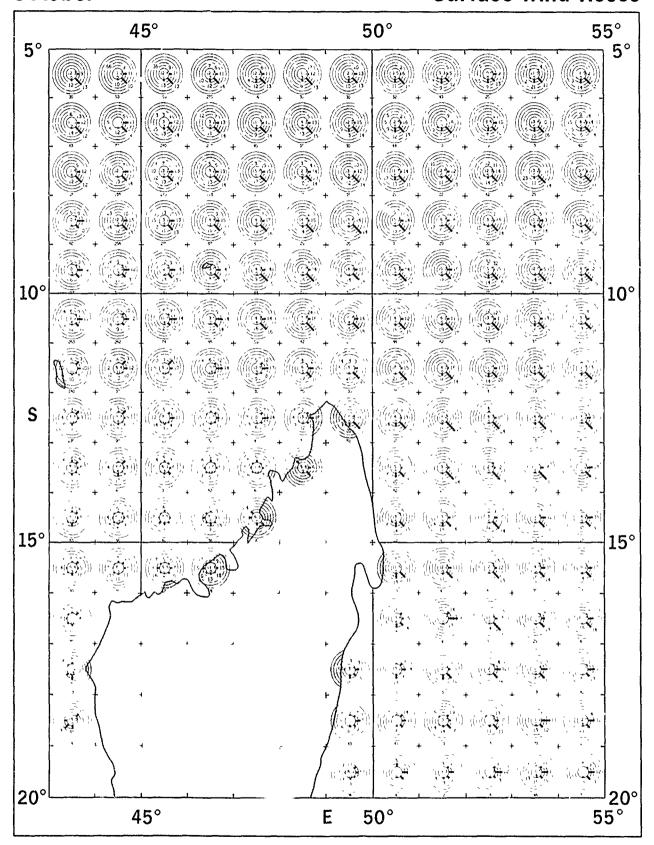
Mean Scalar Wind Speed

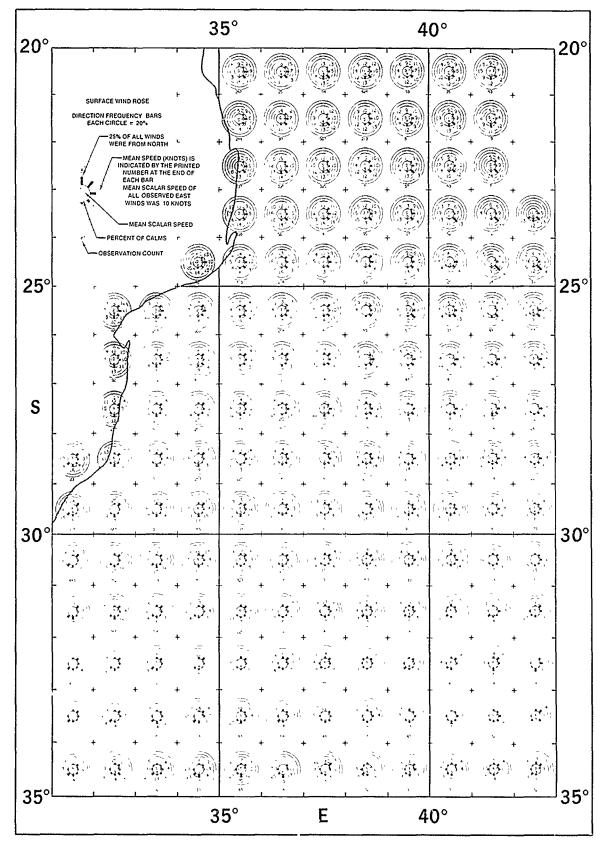


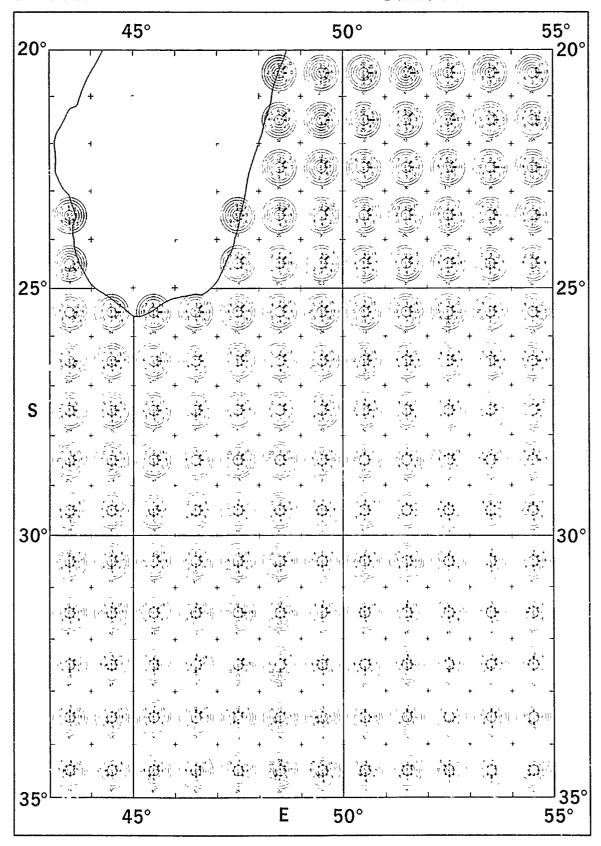




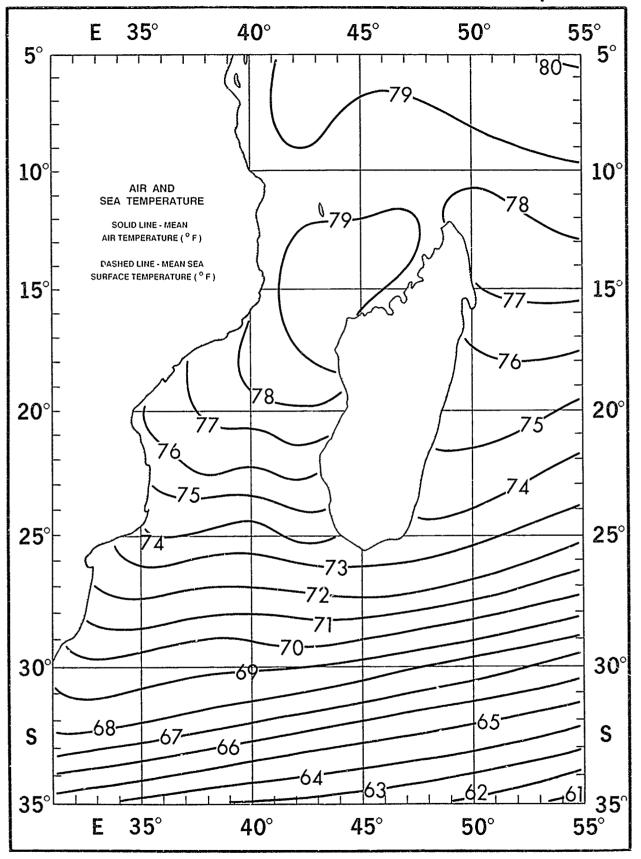


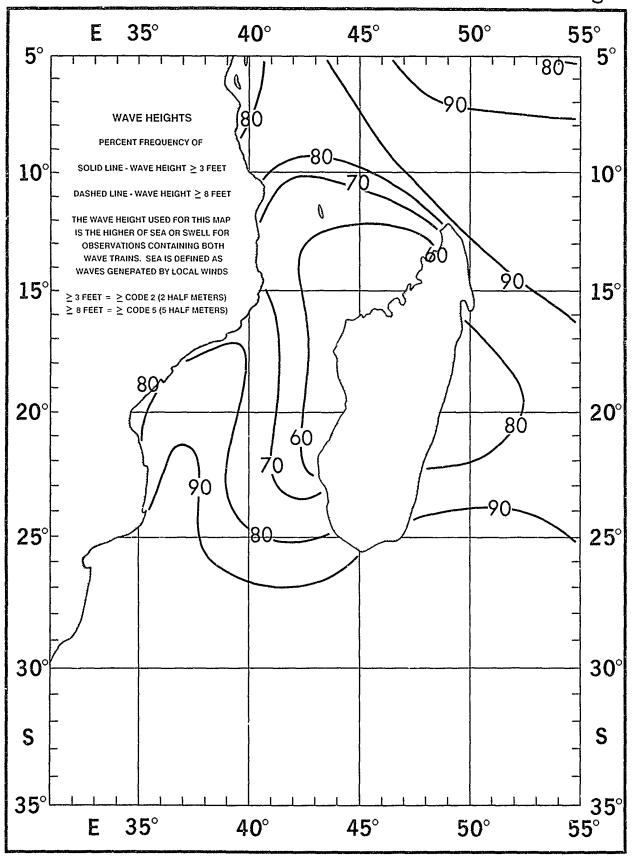


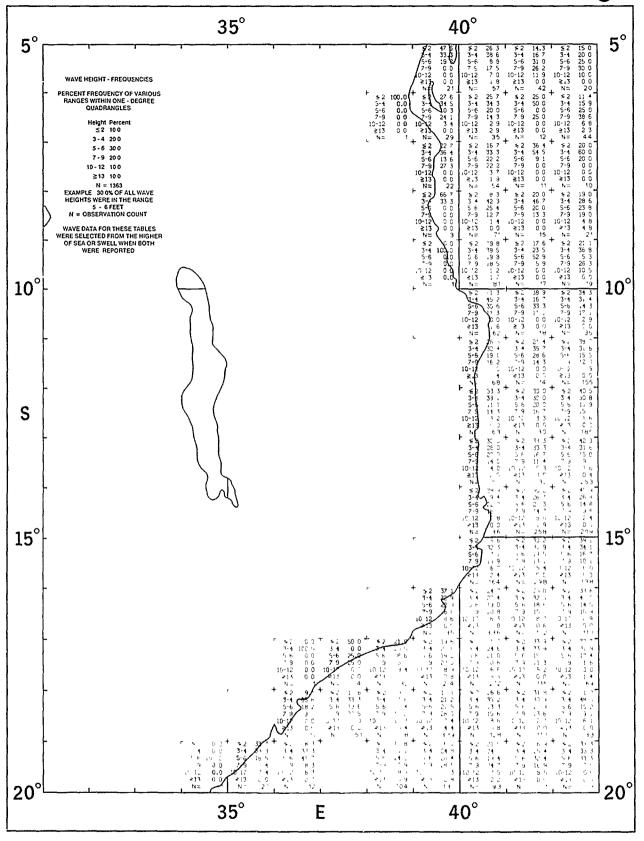




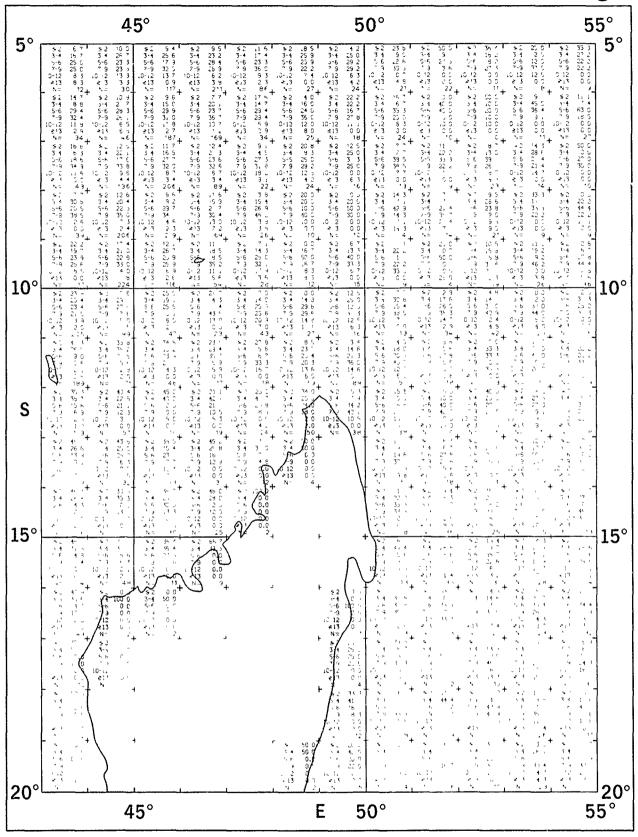
Air and Sea Temperature



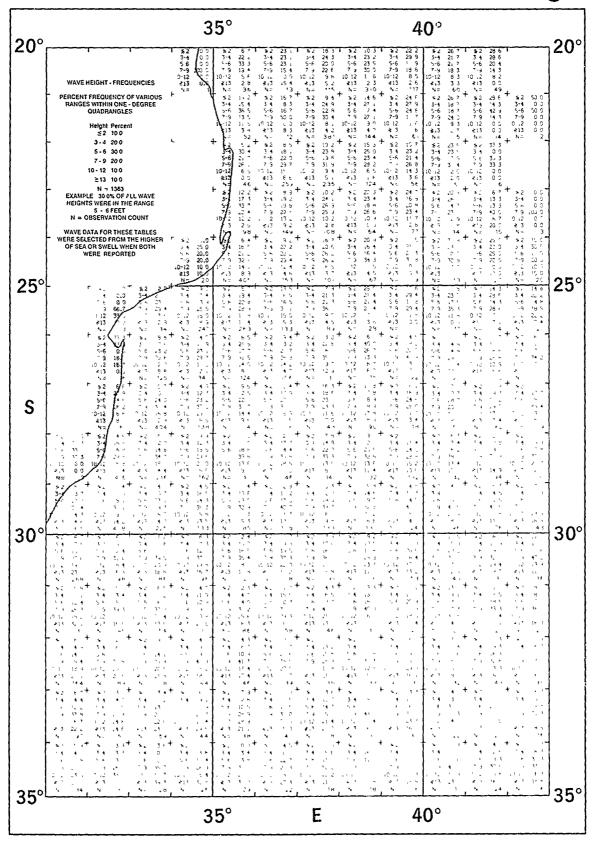




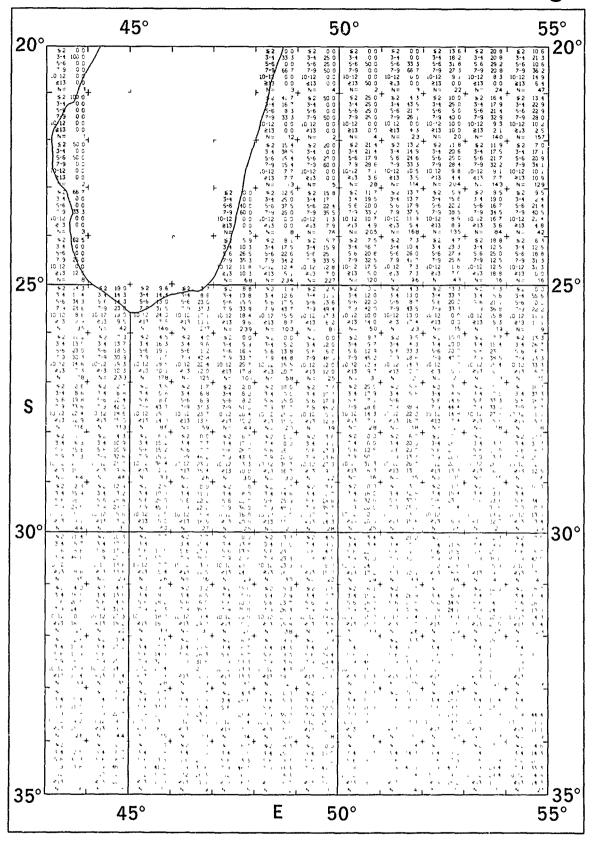
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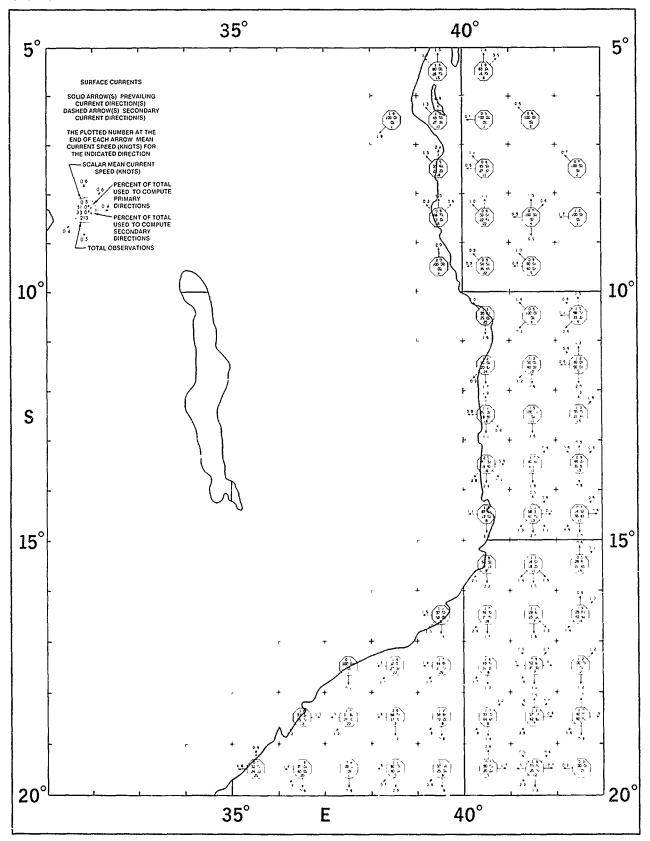


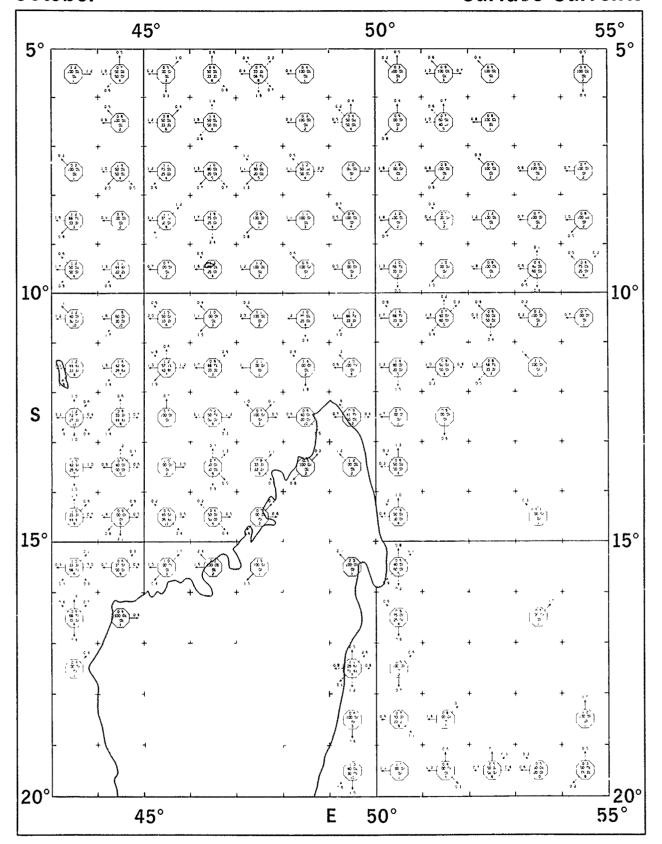
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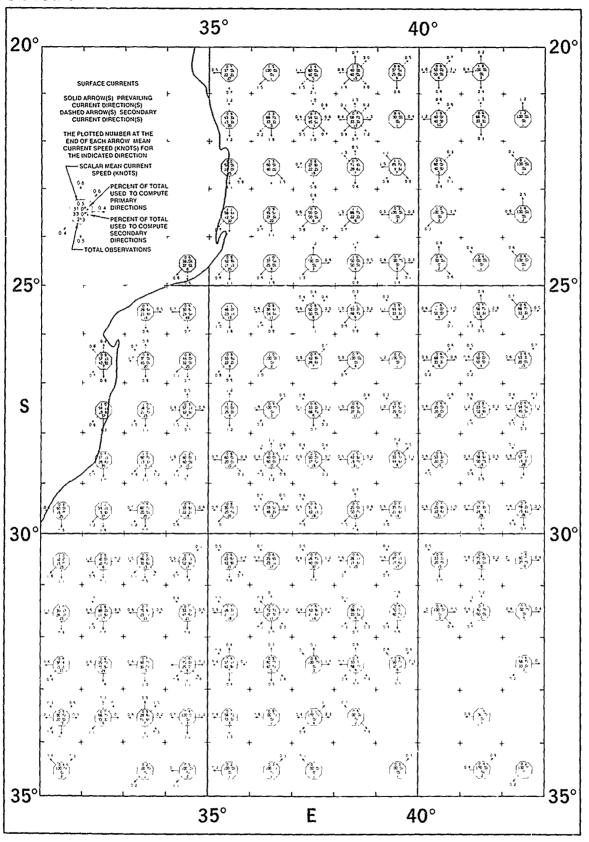


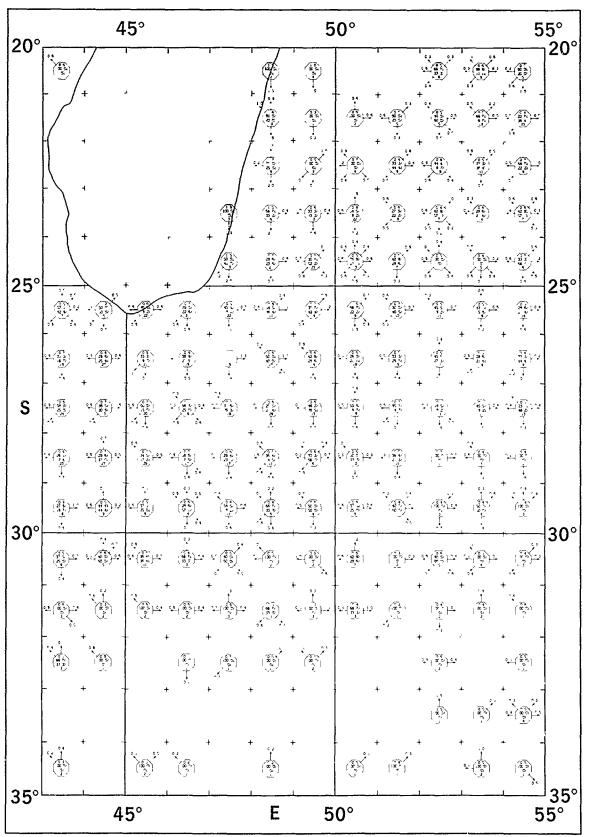
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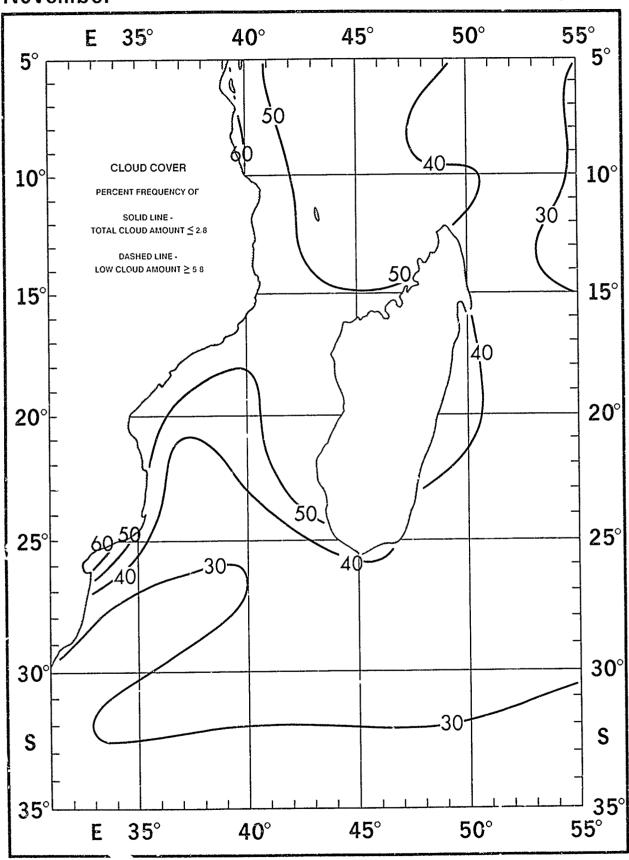






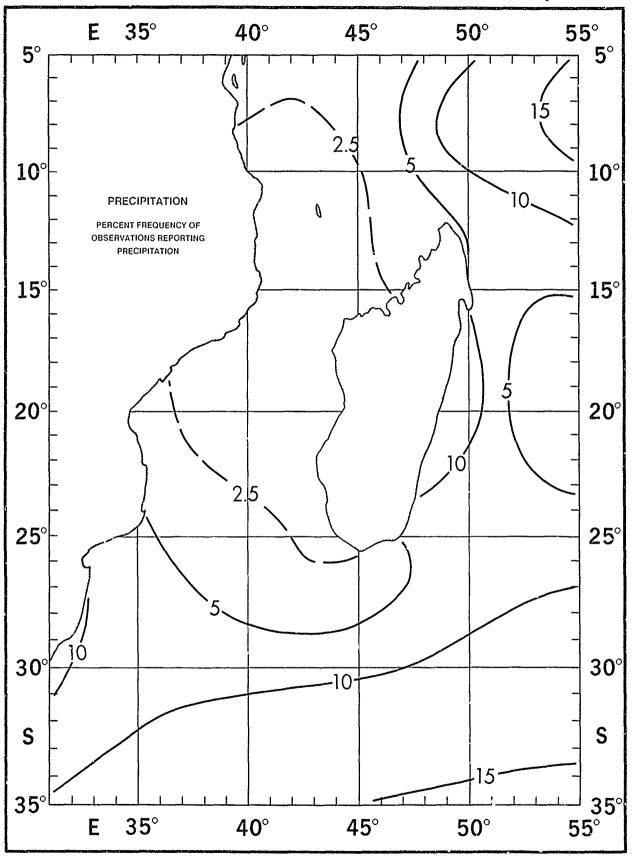


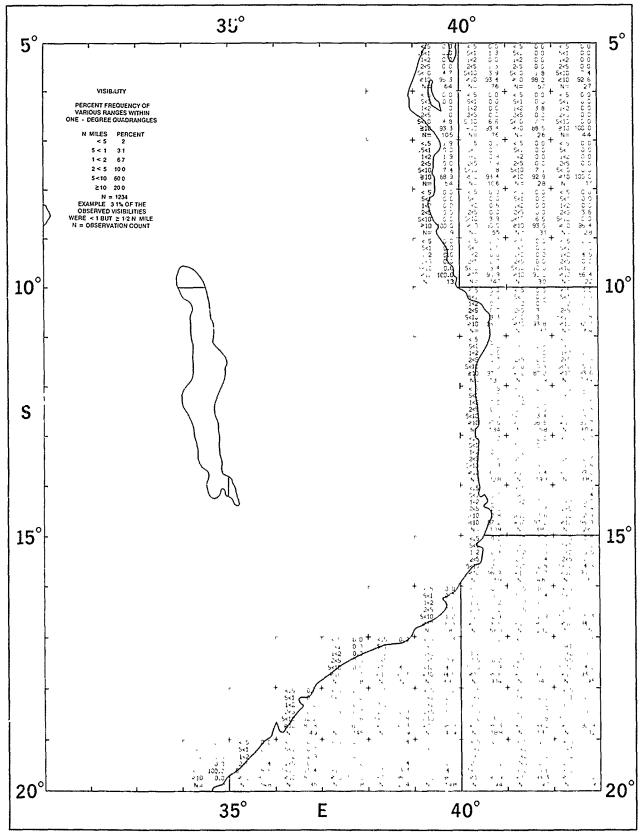


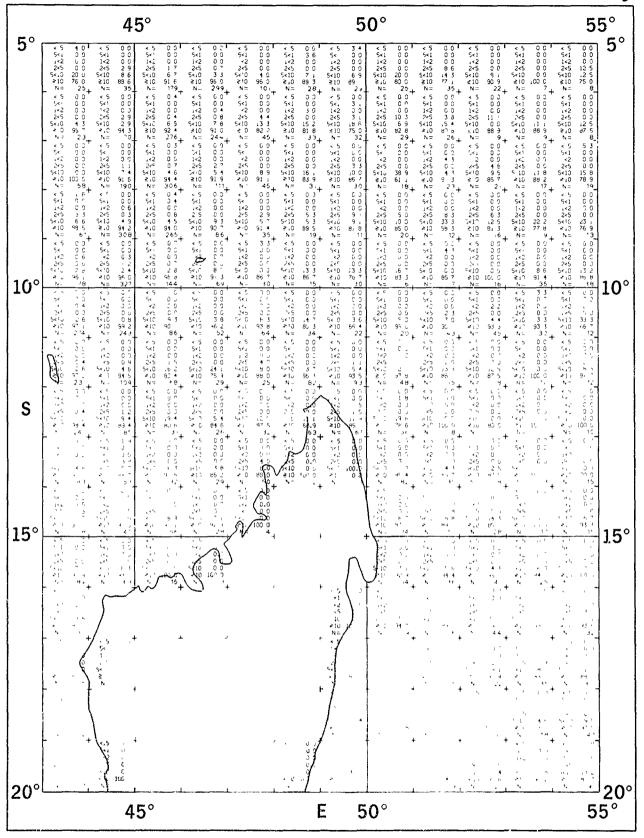


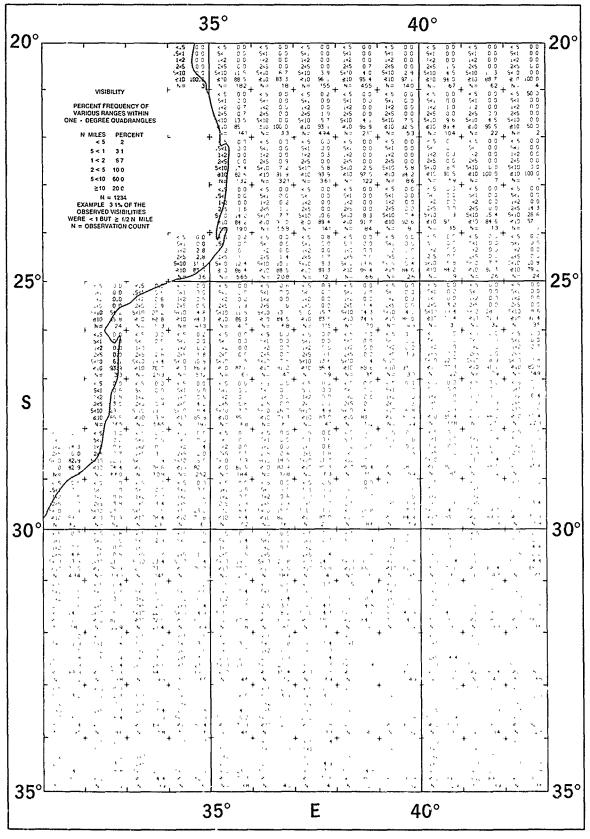


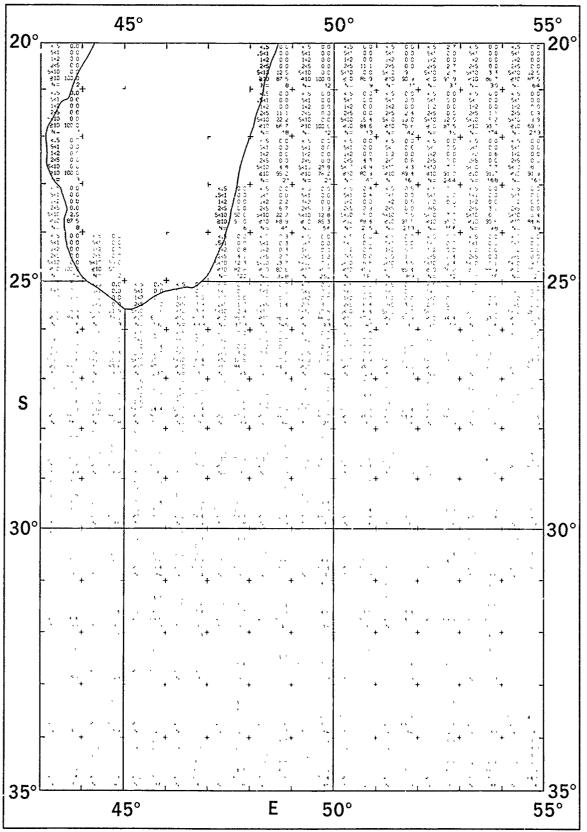
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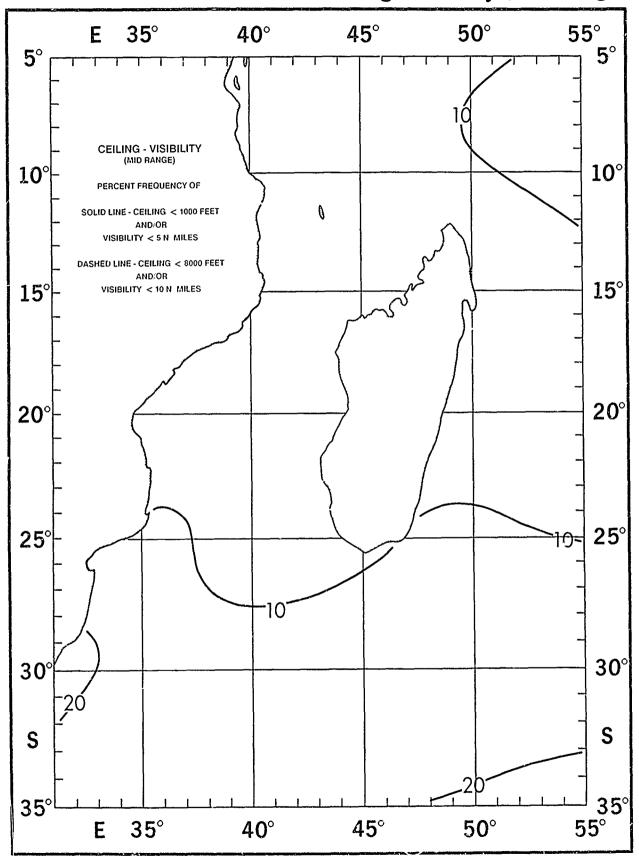


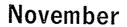




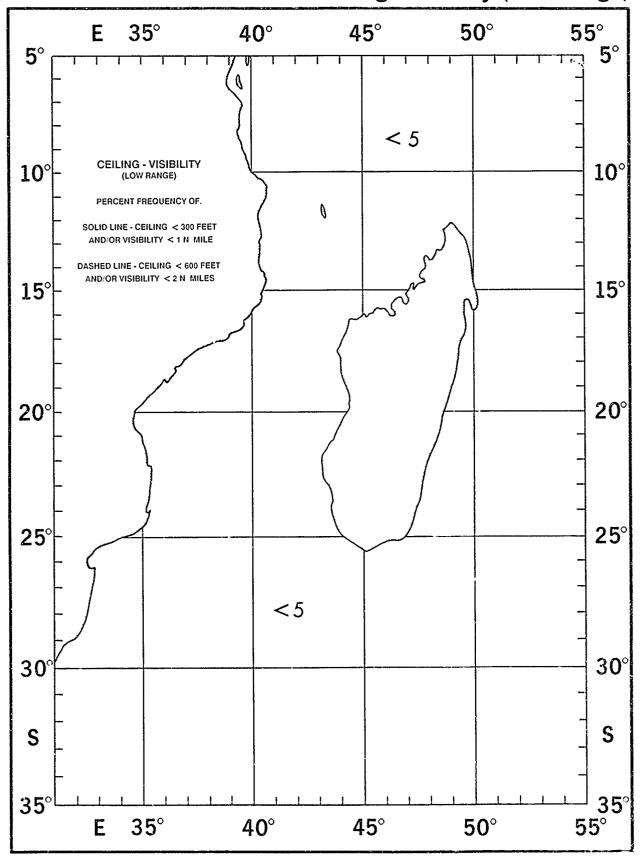




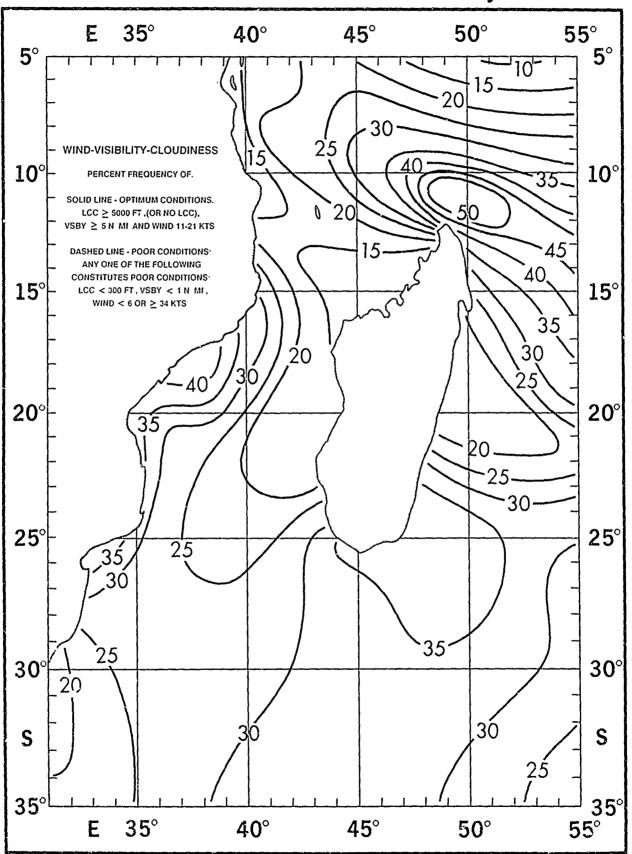




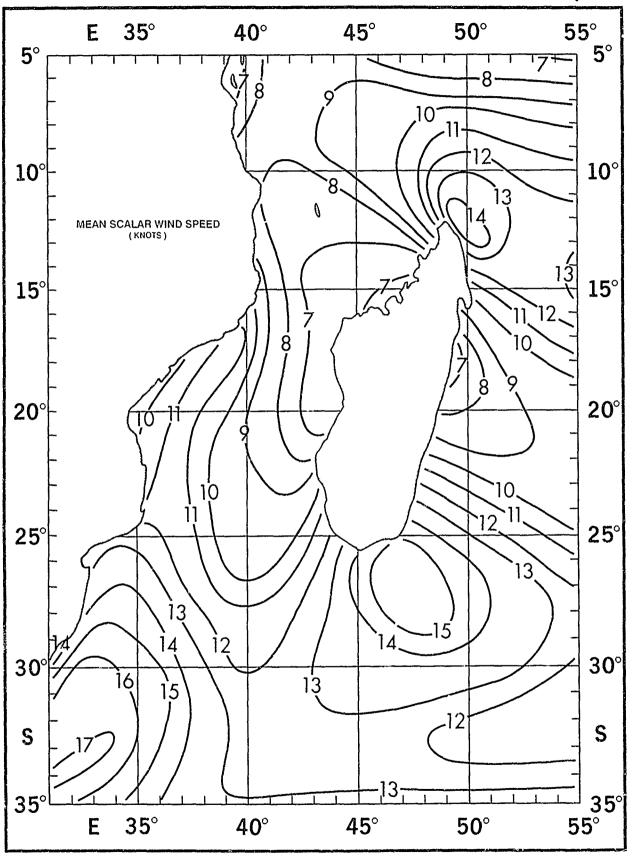
Ceiling - Visibility (Low Range)

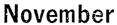


Wind - Visibility - Cloudiness

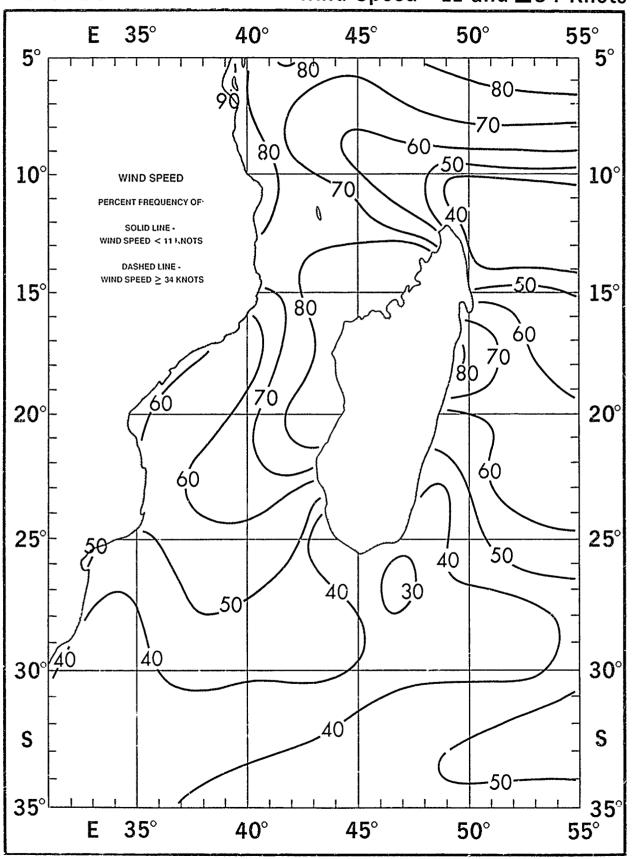


Mean Scalar Wind Speed



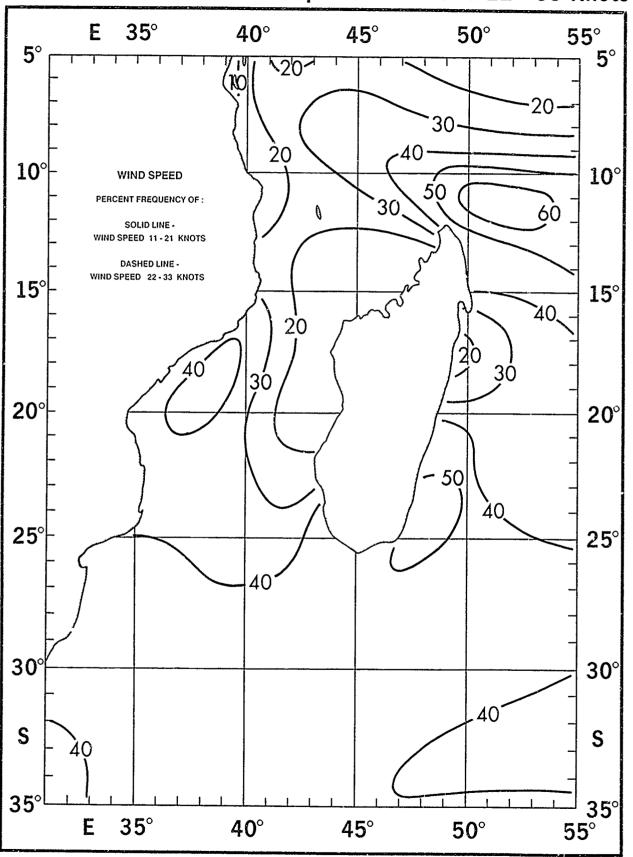


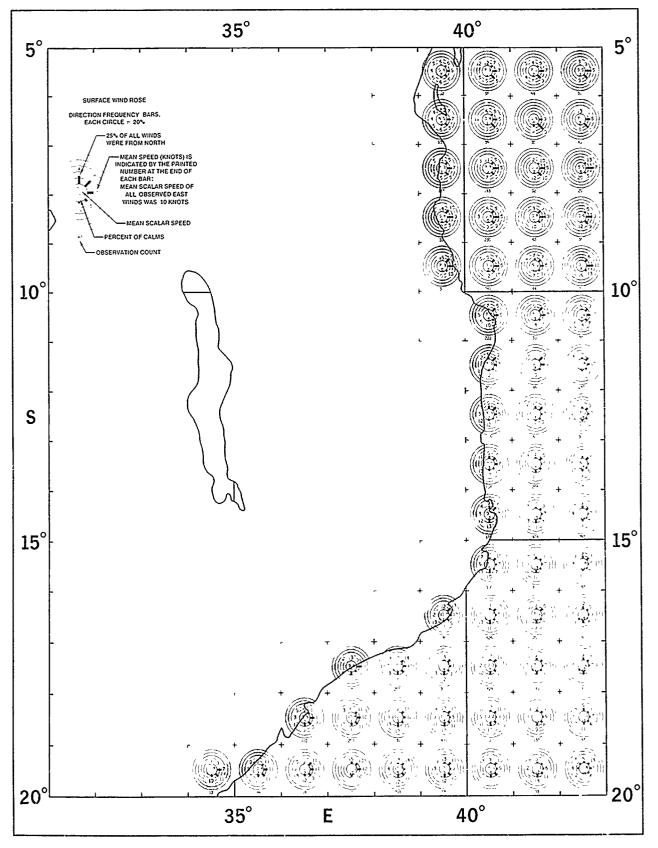
Wind Speed <11 and ≥34 Knots

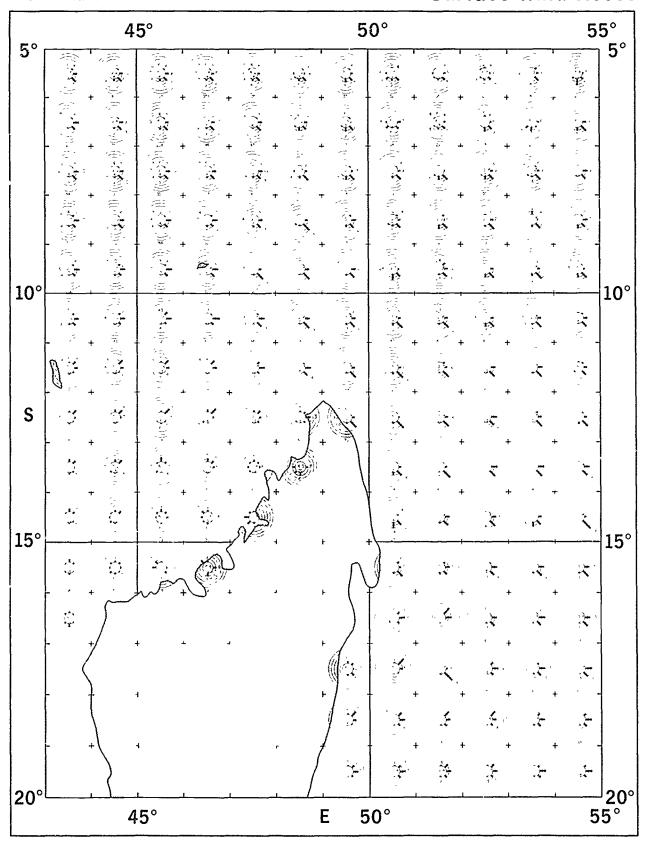


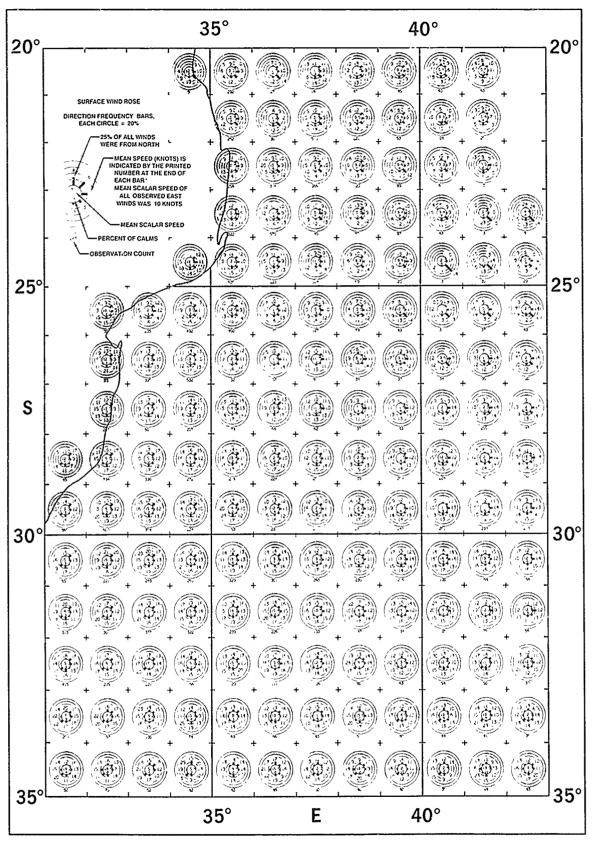


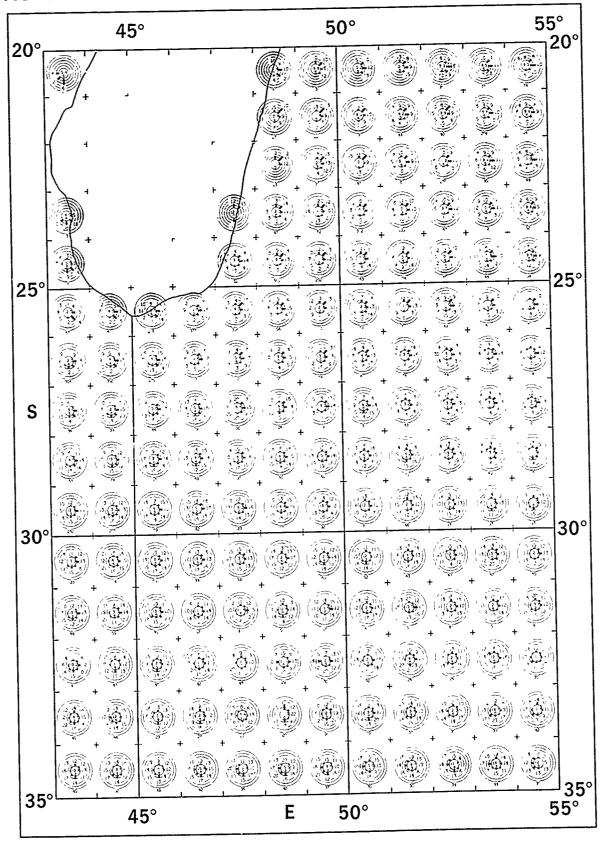
Wind Speed 11 - 21 and 22 - 33 Knots

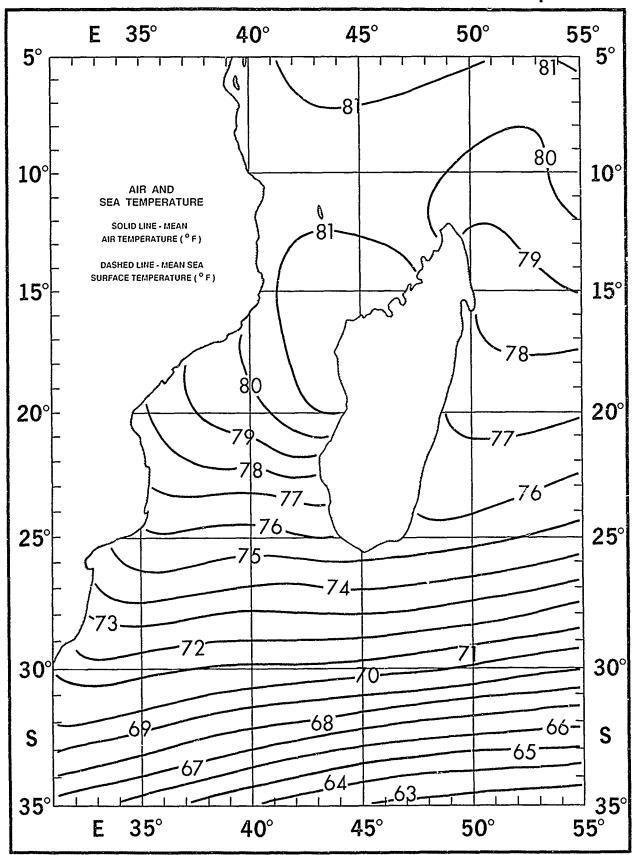


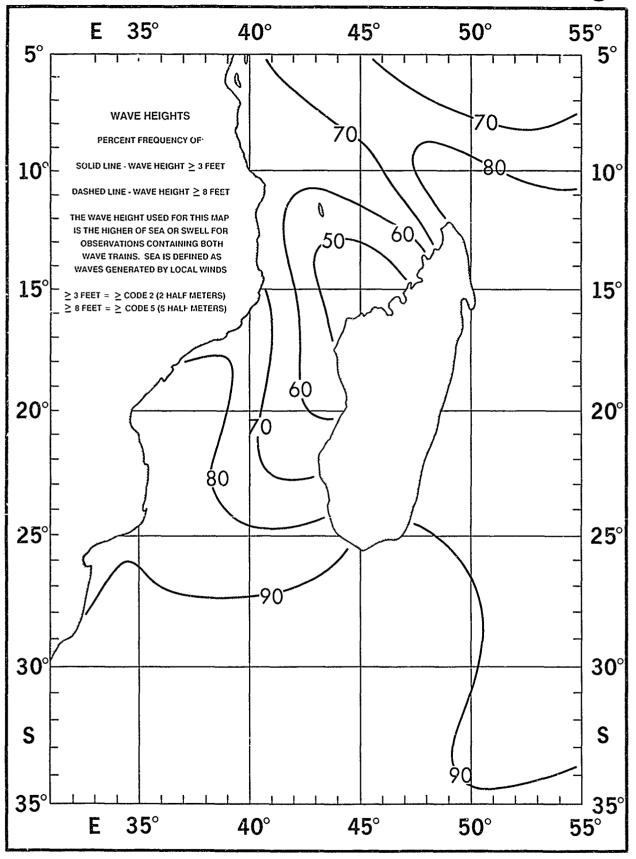


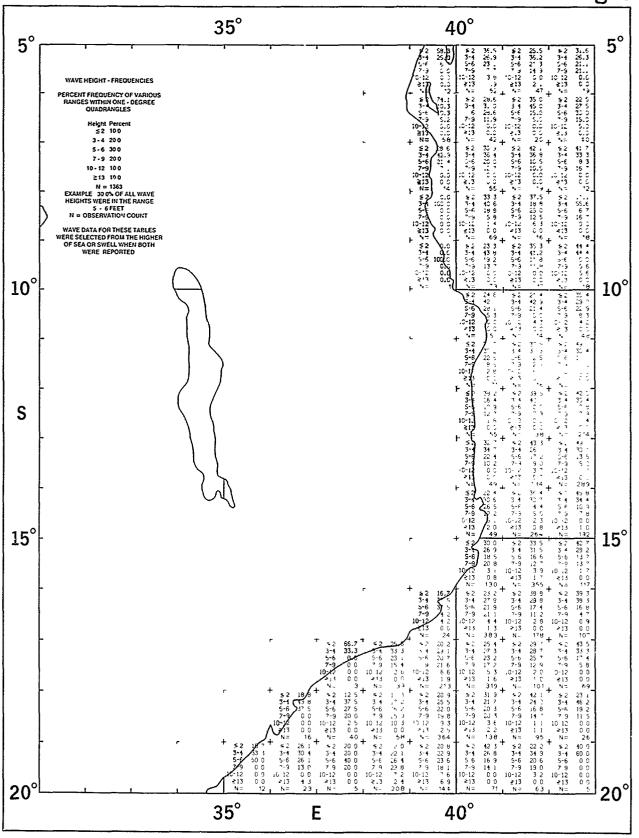


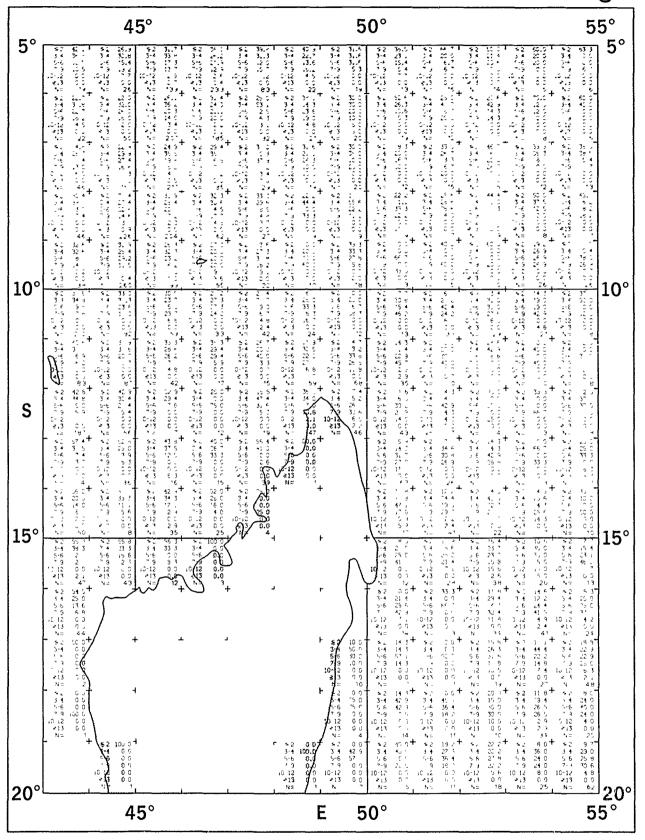


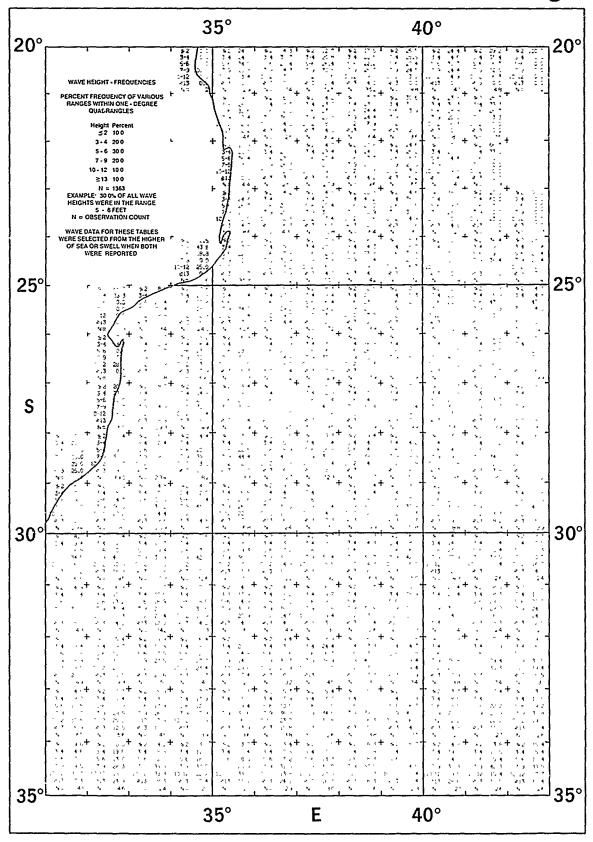


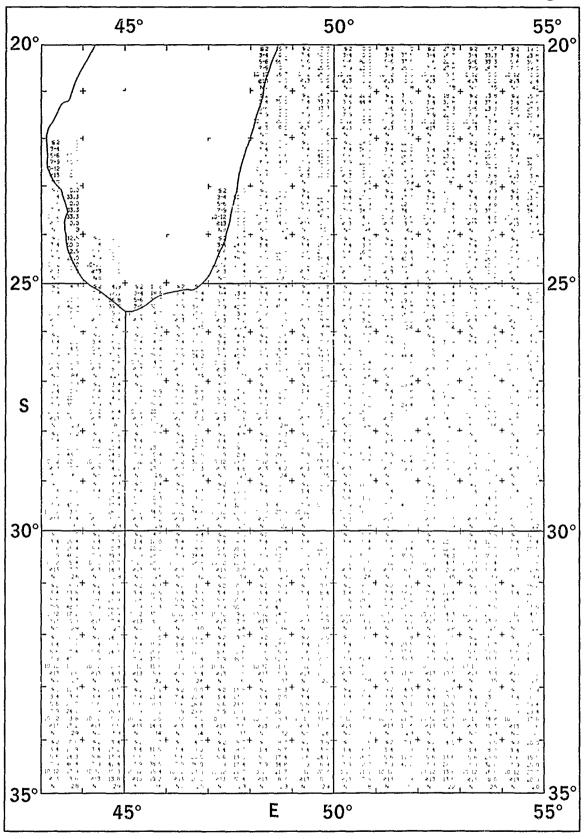


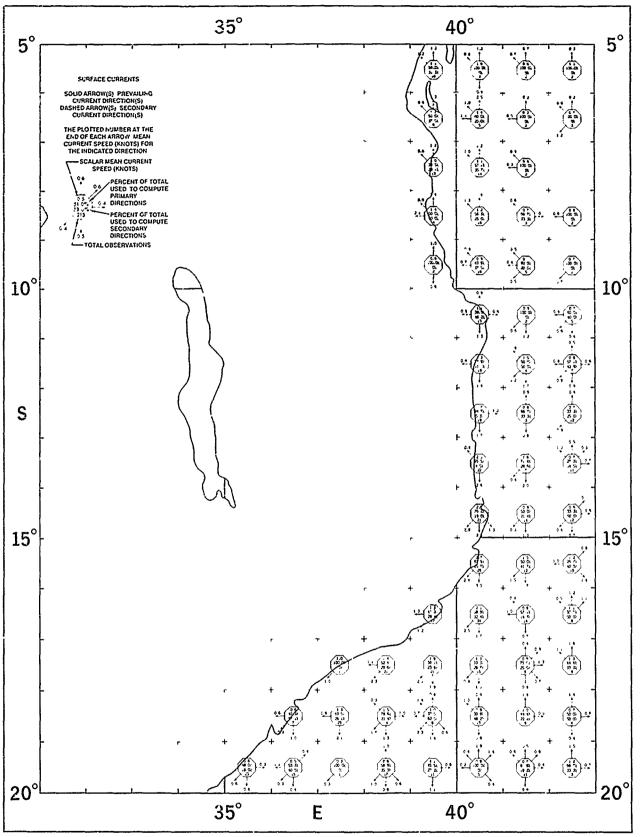


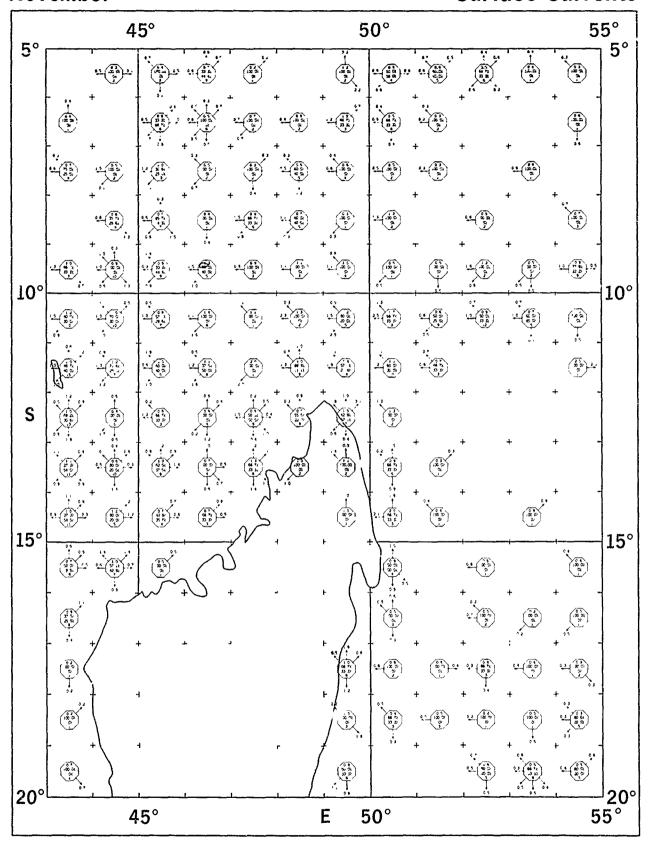


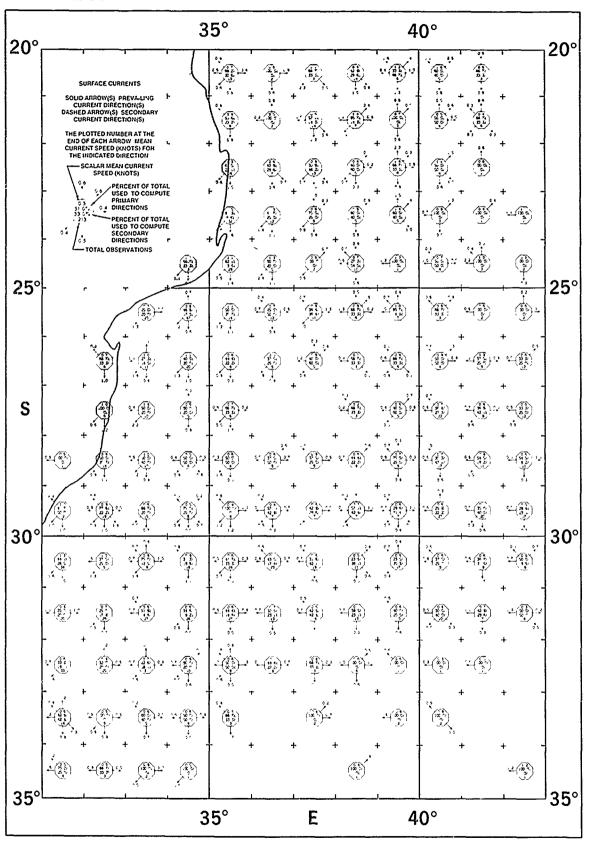


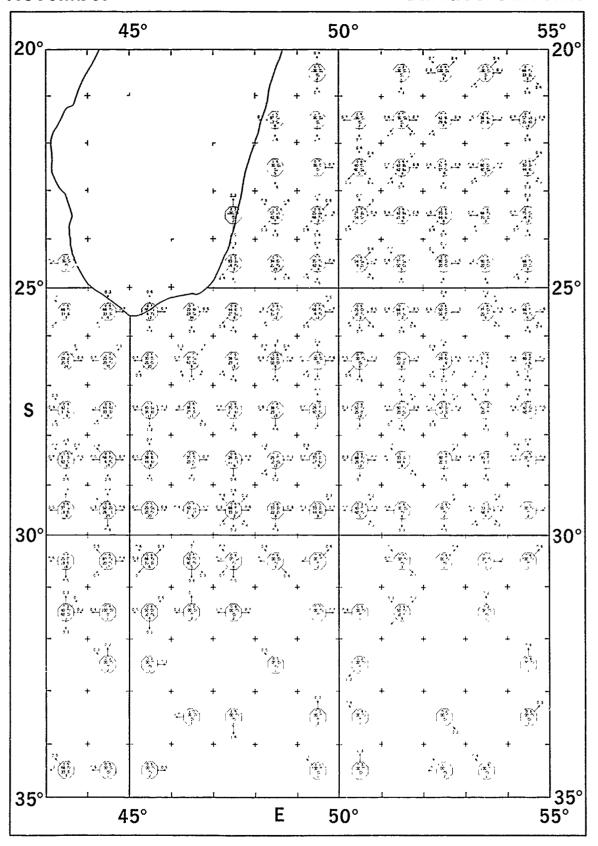


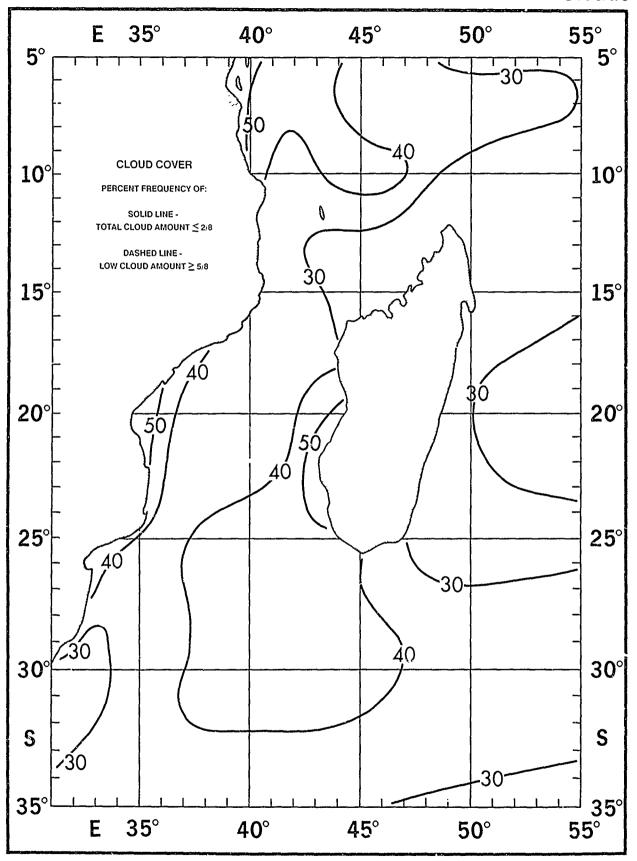


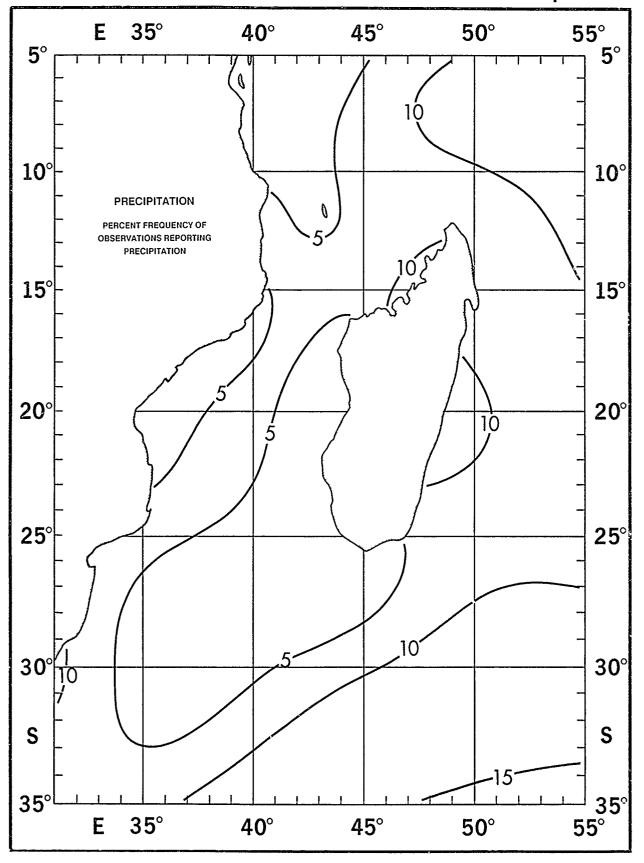






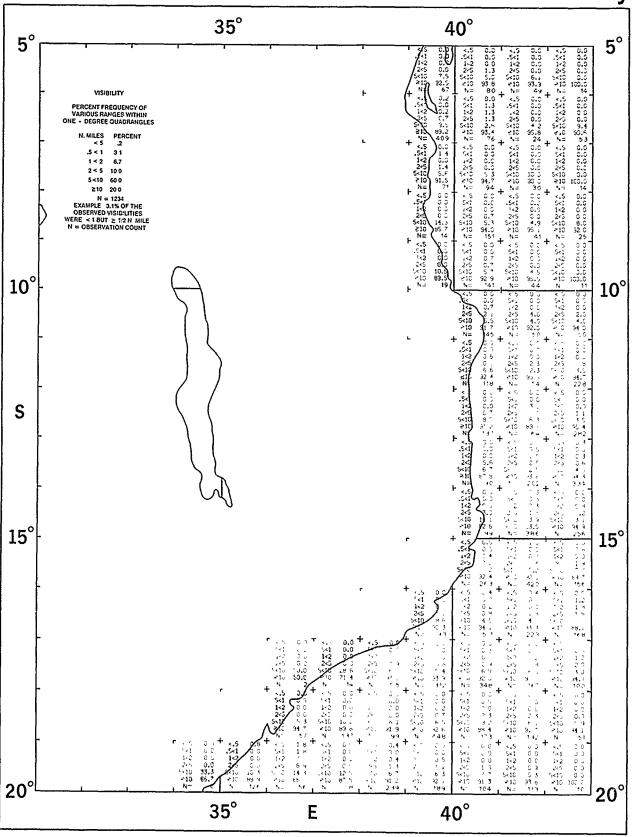




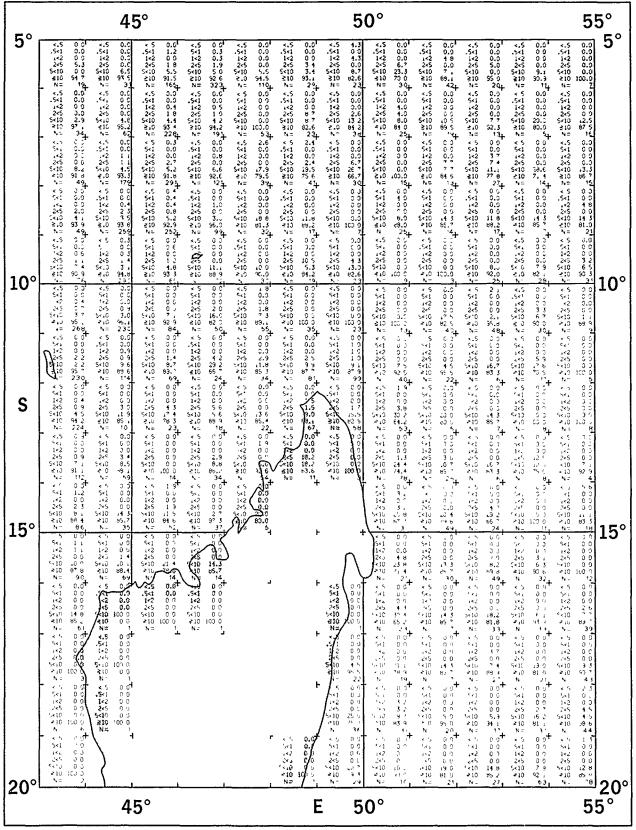




Visibility

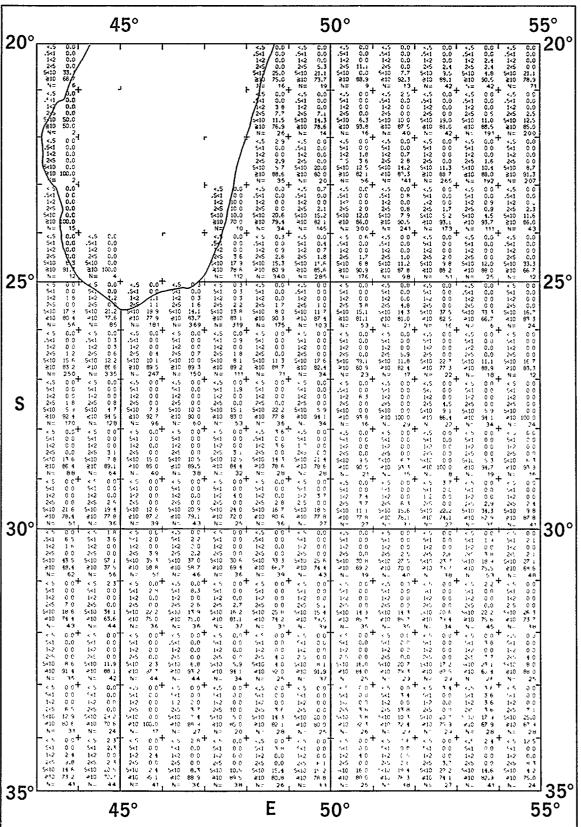


Visibility



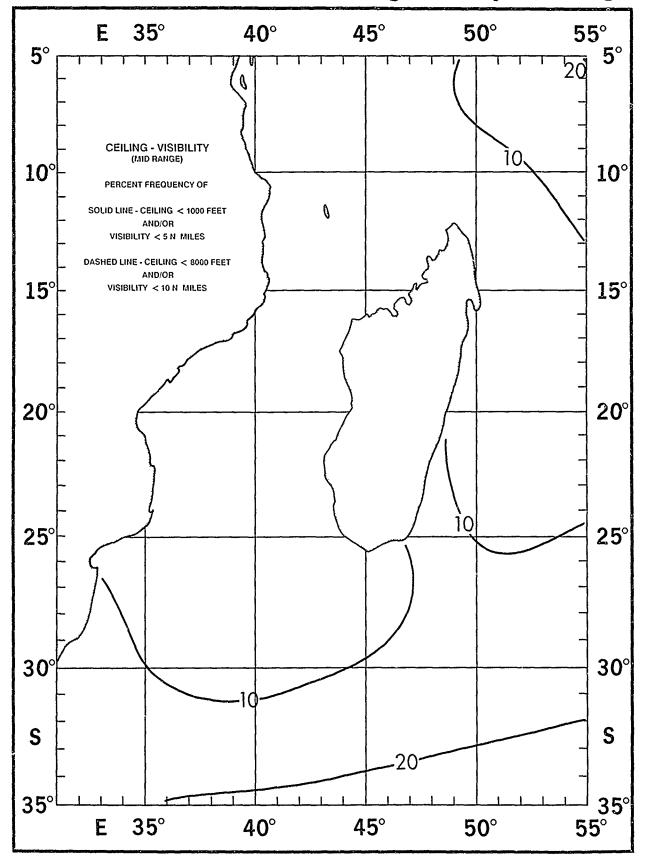
200		35°		40°	
20°	VISIBILITY PERCENI, FREQUENCY OF VARIOUS RANGES WITHIN ONE - DEGREE QUADRANGLES N MILES PERCENT <.5. 2.5 .5 < 1.31	1-2 (0.0 1-2 0.0 1-2 0.0 1-2 0.7 2-5 0	41 00 .541 0.0 .541 42 4.8 1.2 00 142 43 0.0 245 1.5 246 45 0.0 245 1.5 246 46 0.0 245 1.5 246 47 0.0 5.7 810 87.6 810 48 0.0 4 5 0.0 + 5 40 0.0 5.1 0.2 5.1 40 0.1 20 0.2 142 40 0.5 10 0.2 5.1 40 0.5 10 0.2 5.1 40 0.5 10 0.2 5.1 40 0.5 10 0.2 5.1 40 0.5 10 0.2 5.1 40 0.5 10 0.2 5.1 40 0.5 10 0.2 5.1 40 0.5 10 0.2 5.1 40 0.5 10 0.2 5.1 40 0.5 10 0.5 10 0.5 10 40 0.5 10	0.2 <.5	.541 0.0 1-2 0.0 1-2 0.0 1-2 0.0 1-2 0.0 1-2
0.	1 < 2 6.7 2 < 5 100 5 < 10 0 5 < 10 00	N= 124	45 00 2:5 20 2:5 10 914 810 92:1 810 10 914 810 92:1 810 5 02 + 5 07 + 5 5 02 + 5 07 + 5 4 00 5:1 0.0 5:1 290 N 10 0.0 1:2 29	2.3 2-5 0.0 2-5 2.7 2-5 0.0 25.0 0.0 1.0 5.1 0	265 00 0 610 100 0 0 0 0 0 0 0 0 0 0 0 0 0
25°	10 10 10 10 10 10 10 10	S	S 00 < 5 00 < 5 00 < 5 00	70	50 00 50 00 60 60 00 60 00 60 00 60 00 60 00 60 6
30°	A10 / 74.4 A10 85.8	**************************************	10 91	80 0 210 81.6 210 81.6 4.0 89.5 310 91.6 4.0 89.5 310 91.6 4.0 89.5 310 91.6 4.5 310 91.6 91.6 4.5 310 91.6 91.6 91.6 91.6 91.6 91.6 91.6 91.6	410 88 9 + 227 + 5 0 0 541 7 0 162 0 0 265 1 0 265 1 0 540 93 3 + 105 + 5 0 0 541 0 0 542 0 0 543 0 0 544 0 0 545 0 0 546 0 0 547 0 0 548 0 0 548 0 0 549 0 0 549 0 0 540 0 0 540 0 0 540 0 0 540 0 0 541 0 0 541 0 0 542 0 0 543 0 0 543 0 0 544 0 0 545 0 0 546 0 0 547 0 0 548 0 548 0 0 548 0 548 0 0
30	\$ 5 00 \$ 5 00 \$ 4.5 00 \$ 4.5 00 \$ 1.5 00 \$ 1.5 00 \$ 1.2 0 \$ 1.	541 00 541 10 5 2 10 2 2 5 10 2 2 5 10 2 2 5 10 2 2 5 10 2 2 5 10 2 2 5 10 2 2 5 10 2 2 5 10 2 2 5 10 2 2 5 10 2 2 5 10 2 2 5 10 2 2 5 10 2 2 5 10 2 10 2	22 0 0 12 0 0 12 12 12 12 12 12 12 12 12 12 12 12 12	0 0	561 17 265 000 5610 567 210 400 1 N= 60 1 S7 162 00 541 57 162 00 264 29 266 29 266 29 266 68 1 S7 162 00 162 00 162 00 164 00 164 00 164 00 165 00
35°	500 30 500 al 8 500 20 3 an 656 al 70 al 8 500 20 3 an 656 al 70 al 8 an 656 al 70	N- 57 N- 42 N 45 1: 45 00 4 541 00 541 00 5 142 20 142 00 1 245 1: 245 75 2 5410 1: 5 5410 12 5 54 410 7715 410 80 0 8	10 90 9 810 87 5 840 44 N= 40 N= 5 00 + 5 00 + 5 41 2.2 541 00 544 42 00 142 00 144 45 22 25 25 25	6.9 \$410 7.0 \$420 13.2 \$410 17.6 \$47 \$410 7.6 \$42 \$40 7.6 \$42 \$40 7.6 \$42 \$40 7.6 \$42 \$40 7.6	+10 63 3 + 24 + 5 0 0 5 4 0 0 142 0 0 245 2 4 5 6 10 12 2 410 85 4

Visibility



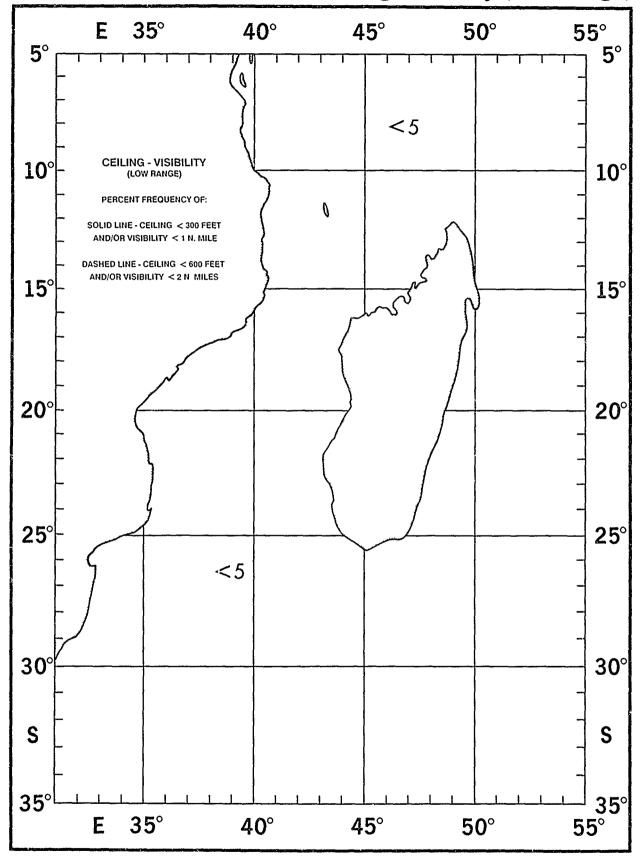


Ceiling - Visibility (Mid Range)

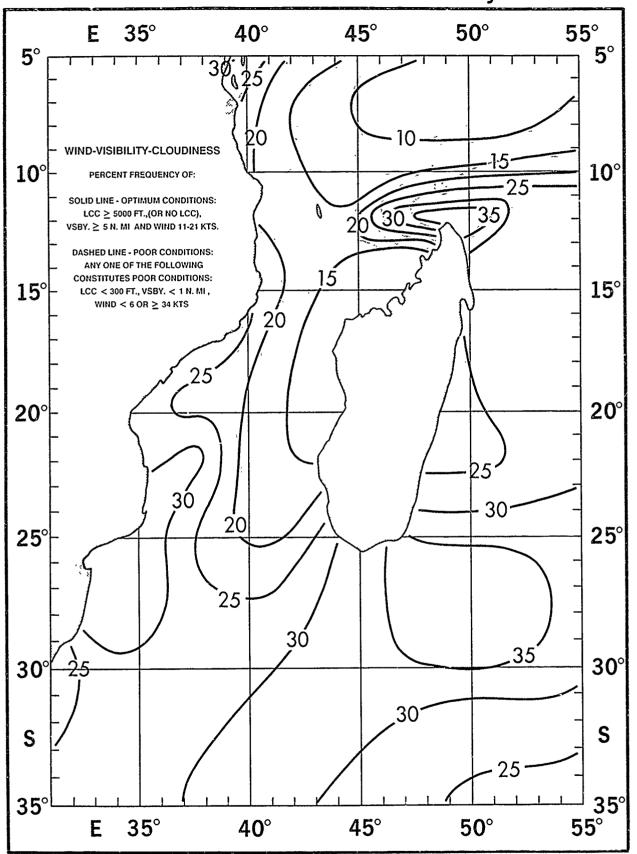




Ceiling - Visibility (Low Range)

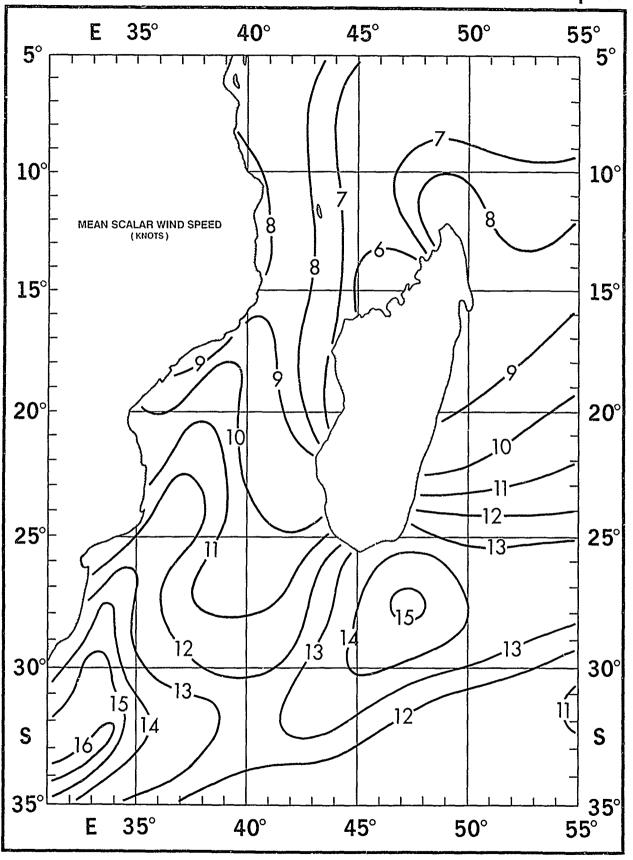


Wind - Visibility - Cloudiness



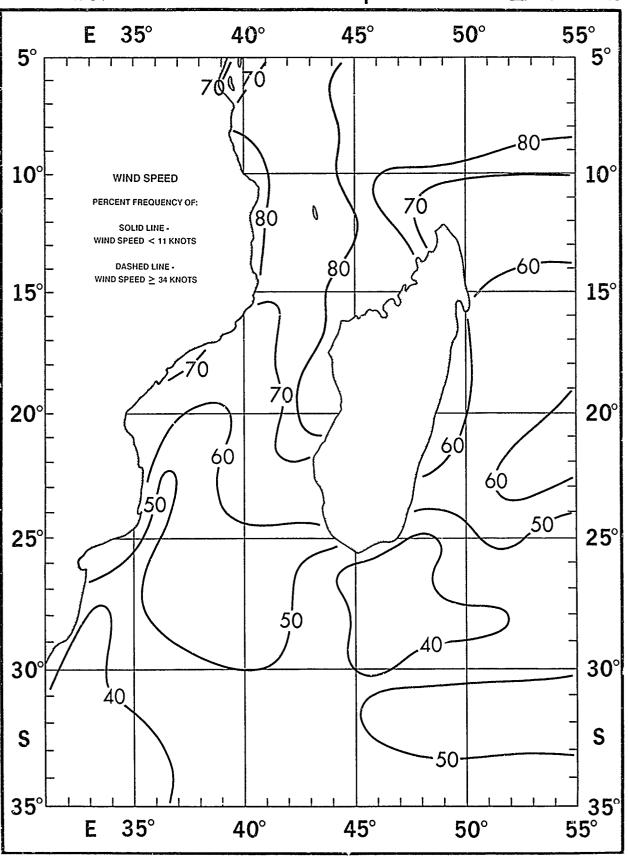


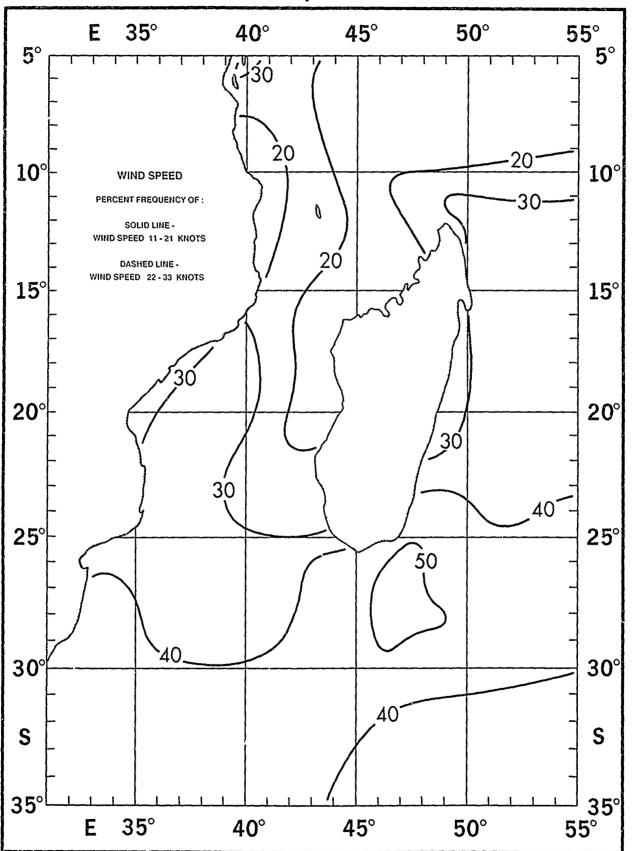
Mean Scalar Wind Speed

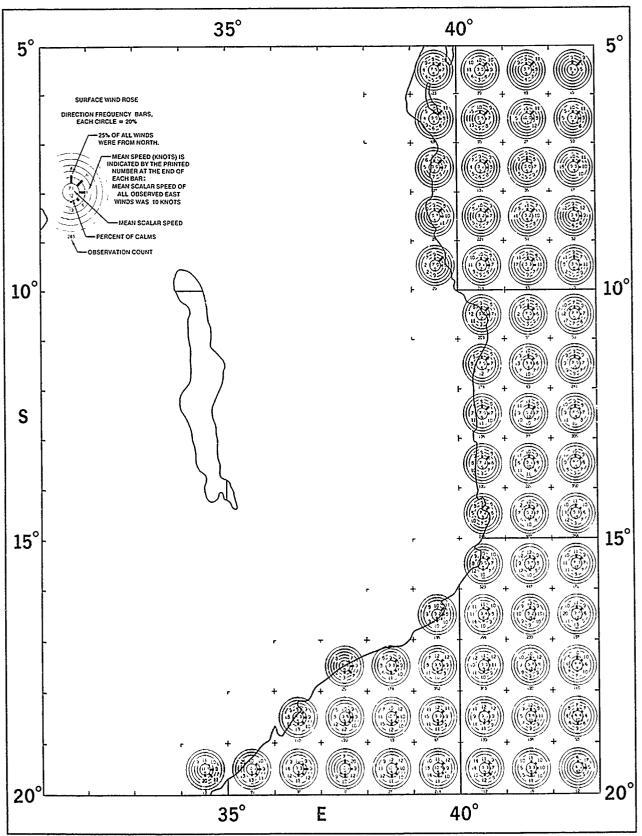


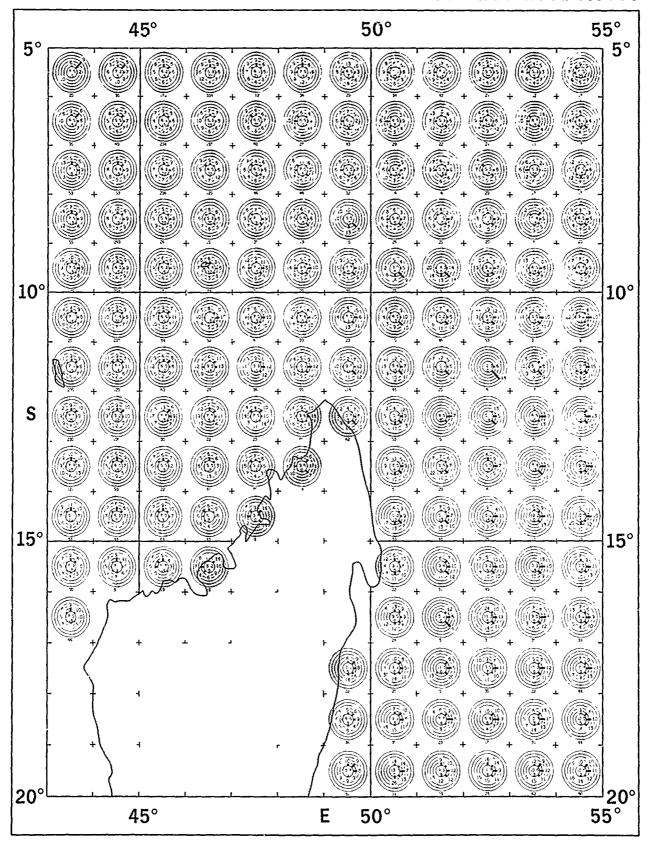


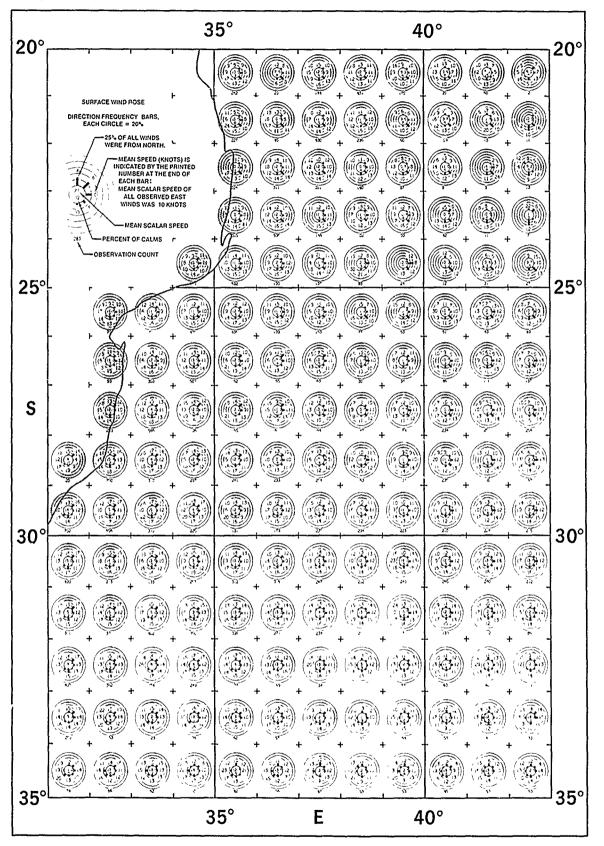
Wind Speed <11 and ≥34 Knots

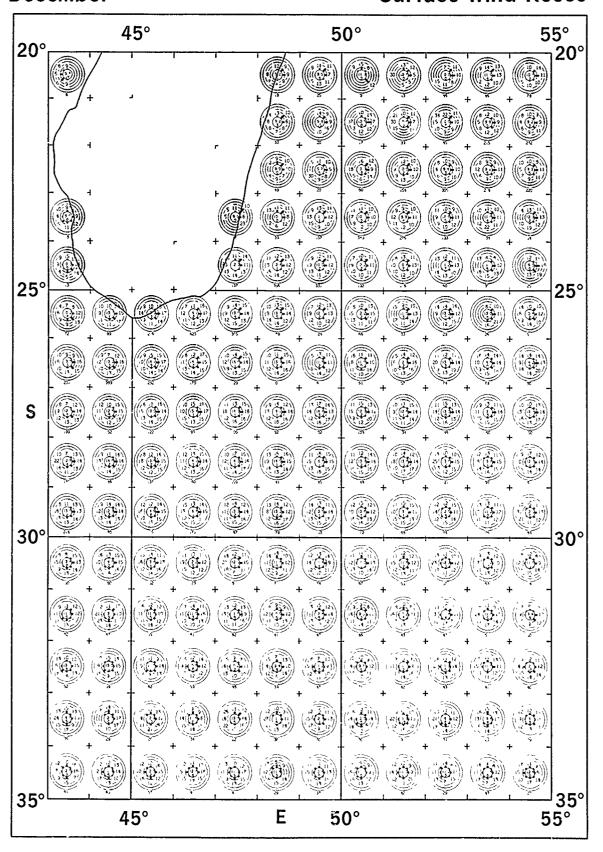


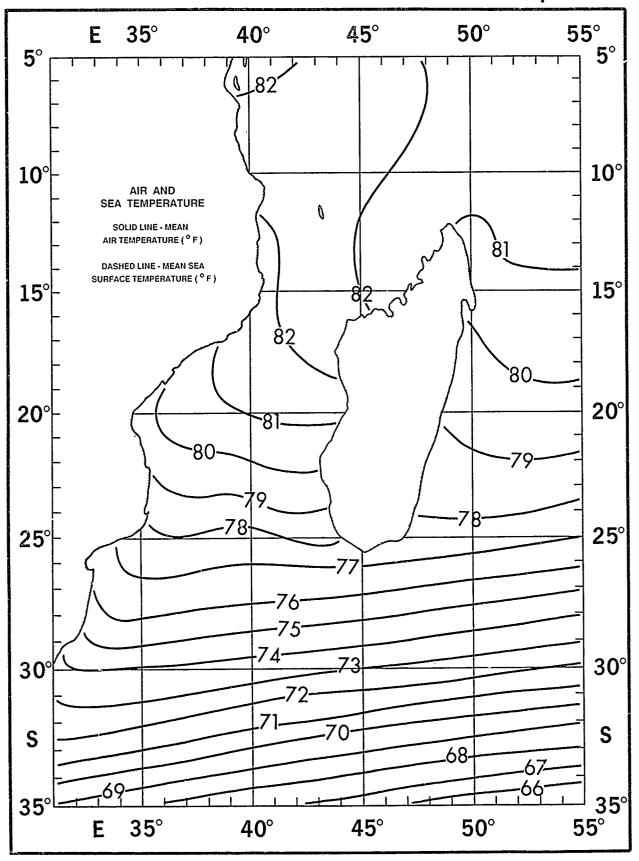


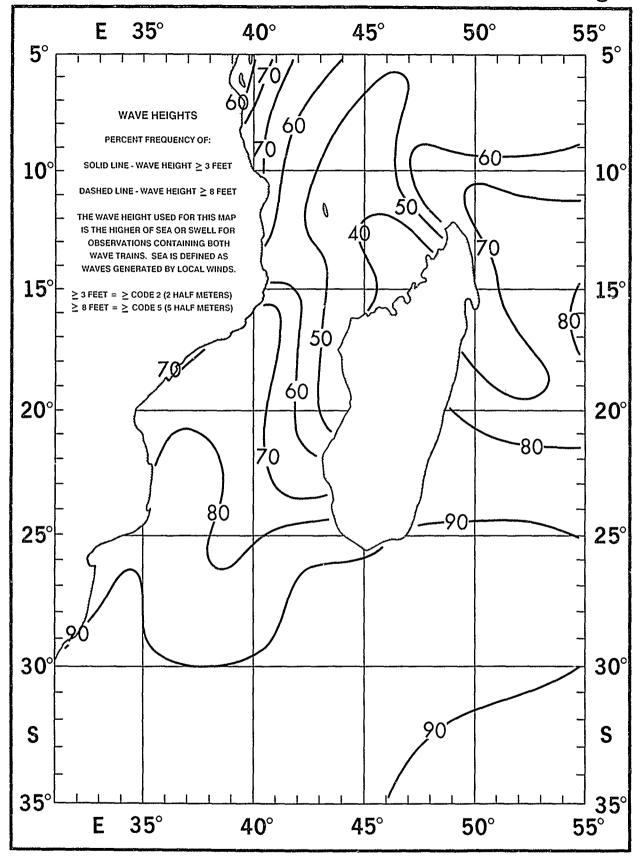


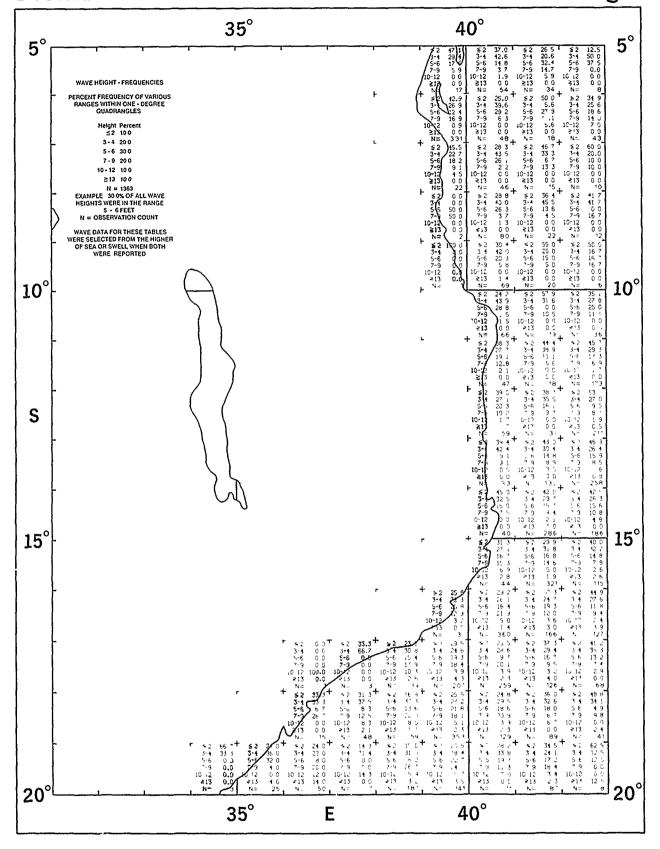








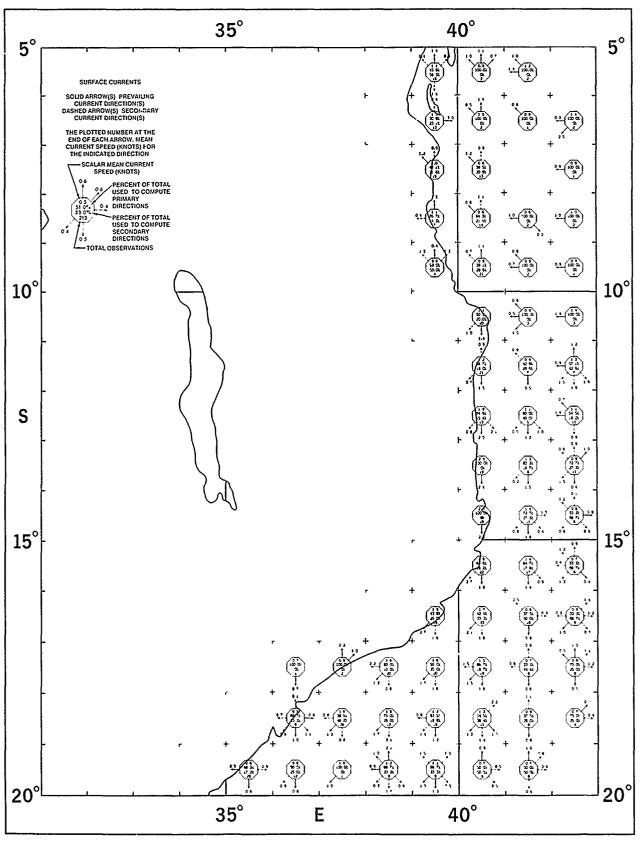


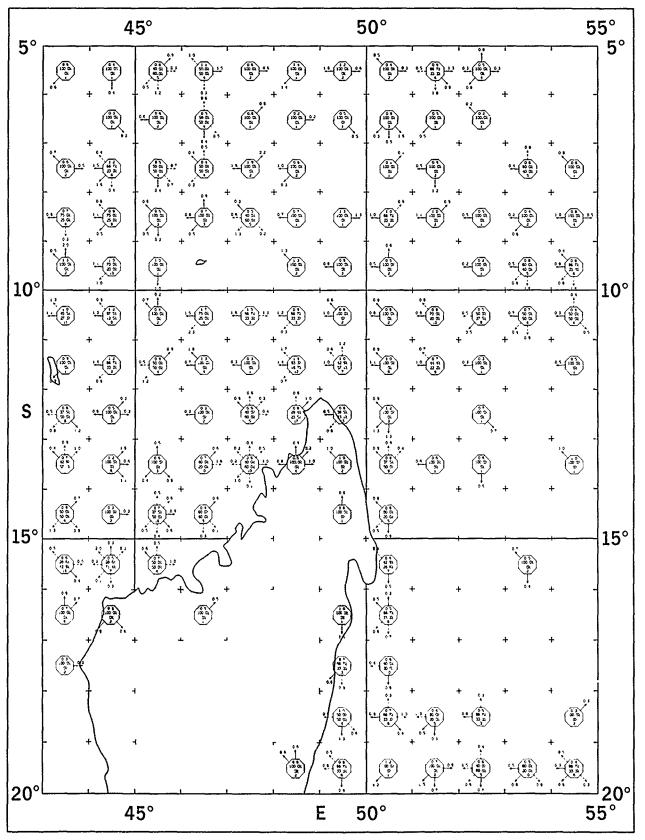


	45°	50°	55°
5°	\$2 21 1 \$2 36 0 \$2 39.5 \$2 49.6 \$\frac{1}{2}\$ 3.4 31 6 3.4 12 0 3.4 32 8 3.4 28.2 5.6 31 6 5.6 28.0 5.6 18.9 5.6 14 5 7.9 10 5 7.9 16.0 7.9 9.0 7.9 7.5 10-12 \$3 10-12 80 10-12 0 0 10-12 1.2 \$13 0.0 \$13 0.0 \$213 0.8 \$213 0.8 \[\text{\text{\$\cup\$1}} \] \[\text{\text{\$\cup\$2}} \] \[\text{\text{\$\cup\$2}} \] \[\text{\text{\$\cup\$1}} \] \[\text{\text{\$\cup\$2}} \] \[\text{\text{\$\cup\$0}} \] \[\text{\text{\$\cup\$2}} \] \[\text{\text{\$\cup\$2}} \] \[\text{\text{\$\cup\$2}} \] \[\text{\text{\$\cup\$2}} \] \[\text{\text{\$\cup\$3}} \] \[\text{\text{\$\cup\$2}} \] \[\text{\text{\$\cup\$3}} \] \[\$2 47 3 \$2 48.0 \$2 467 \$2 27 6 \$2 29 2 \$2 20 0 \$2 57.1 \$3-4 25 3 3-4 22.0 \$3-4 25 0 \$3-4	\$2 80.0 3-4 20.0 5-6 0.0 7-9 0.0 10-12 0.6 \$13 0.0
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	y= a₁T y= 52T y= 12T y= 16T y= 54T y= 10T y= √T	813 0 0 5 N= 5 \$2 53 8 7 3-4 15 4 5-6 15 4 7-9 7 7 10-12 7 7
	7-9 161 7-9 136 7-9 7 7 7-9 4 9 10-12 65 10-12 2 3 10-12 3 9 10-12 C 7 213 0 0 213 0 213 0 0 213 0 213 0 0 213	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	10-12 7 7 ≥13 00 N= 13 ≤2 27 3 3-4 36 4 5-6 9.1 7 9 27 3
	\$\frac{1}{5}\cdot \frac{1}{6}\cdot \frac	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10-12 0 0 ∉13 0 0 N= 11
	\$2 556	≥13 00 ≥13 00 ≥13 00 ≥13 00 ≥13 00 ≥13 00 N= 19, N= 9, N= 5 N= 10, N= 7, N= 11 N= 2,	\$2 53 6 3-4 23 ↓ 5-6 15 4 7-9 7 7 10-12 6 0 ≥13 0 0 0
100	5-2 45-4 5-2 50.0 5-2 51.5 5 5-2 63.2 7 3-4 27.0 3-4 31.3 3-4 27.7 3-4 17.5 5-6 15.6 5-6 11.2 5-6 11.5 5-6 11.5 5-6 11.2 5-6 11.2 5-6 11.5 5-6 11.0 12.1 4 10-12 4.0 10-12 1.5 10-12 1.8 13.0 0 ≥ 13.0	\$\frac{2}{2}\frac{2}{9}\frac{7}{8}\frac{2}{9}\frac{41}{4}\frac{4}{7}\frac{5}{2}\frac{63}{6}\frac{7}{8}\frac{2}{66}\frac{77}{7}\frac{5}{2}\frac{53}{3}\frac{7}{3}\frac{5}{3}\frac{3}\frac{3}{3}\frac{3}\frac{3}\frac{3}{3}\frac{3}{3}\fr	\$2 20 8 3-4 25 0 5-6 3' 5 7 9 16 7 10-12 0 0 ≥13 0 0
10°	\$\frac{2}{5}\$\frac{3}{6}\$\$\frac{1}{2}\$\frac{6}{3}\$\frac{1}{2}\$\$\frac{1}{2}\$\frac{5}{3}\$\frac{1}{3}\$\frac{1}{4}\$\frac{1}{2}\$\frac{1}{3}\$\frac{1}{4}\$\frac{1}{2}\$\frac{1}{3}\$\frac{1}{4}\$\frac{23}{3}\$\frac{1}{4}\$\frac{23}{3}\$\frac{1}{4}\$\frac{23}{3}\$\frac{1}{4}\$\frac{23}{3}\$\frac{1}{4}\$\frac{23}{3}\$\frac{1}{4}\$\frac{23}{3}\$\frac{1}{4}\$\frac{23}{3}\$\frac{1}{4}\$\frac{1}{2}\$\frac{1}{4}\$\frac{1}{4}\$\frac{1}{2}\$\frac{1}{4}\$\frac{1}	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	N= 24 \$2 14 3 3-4 28 6 5-6 28 6 7-9 28 6 10 12 0 0 ≥ 3 0 0
	3-4 27 6 3-4 29 1 3-4 35 0 3-4 35 9 9 -	5-2 381 \$2 277 \$2 381 \$2 282 \$32 \$4 20 6 3-4 20 6 3-4 13 3 5-4 10 0 5-2 40 0 5-4 10 0 5-6 33 3 5-6 25 5 5-6 27 5 5-6 37 5 5 6 40 0 5-6 50 0 5-6 40 0 7-9 9 5 7-9 17 0 7-9 87 7-9 12 5 7 9 00 0 7-9 5 0 0 7-9 10 0 10 12 0 10 12 0 10 10 12 0 10 10 12 0 10 10 12 0 10 10 12 0 10 10 12 0 10 10 12 0 10 10 12 0 10 10 12 0 10 10 12 0 10 10 12 0 10 10 12 0 10 10 12 0 10 10 12 0 10 10 12 0 10 10 12 0 10 10 12 10 10 10 10 12 10 10 10 10 10 10 10 10 10 10 10 10 10	5-7 F0 C 5-5-6 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
s	\$2 541 ' \$2 534 \$2 658 ' \$2 80 9" 5-4 27 6 3 4 23 3 3-4 18 8 3-4 91 5-6 16 0 5-6 15 5-6 6 3 5-6 0 0 -9 7 1 7-9 8 2 7 9 6 7 9 2 0 10 12 12 10 12 0 0 10-12 0 0 213 0 0 213 0 0 213 0 0 213 0 0	\$2 \$45\$\frac{5}{5}\$ \$2 \$436\$ \$2 \$439\$ \$2 \$21 \$2\$ \$2 \$03\$\frac{7}{5}\$ \$2 \$60\$\frac{7}{5}\$ \$2 \$60\$\frac{7}{5}\$ \$2 \$60\$\frac{7}{5}\$ \$3 \$60\$\frac{7}{5}\$ \$3 \$60\$\frac{7}{5}\$ \$3 \$60\$\frac{7}{5}\$ \$3 \$60\$\frac{7}{5}\$ \$3 \$60\$\frac{7}{5}\$ \$60\$\frac{7}{5}	\$2 25 0 3-4 25 0 5-6 50 0 '9 5' 10-12 0 0 213 0 0
	N= 170 N= 73 N= 16 N= 11 52 45 2 52 51 1 52 71 4 52 65 7 54 27 4 3-1 25 5 3-4 28 6 3-4 27 8 56 16 5 5-6 10 6 5-6 0 0 5-6 5 6 7-9 9 5 7-9 10 6 7-9 0 0 7-9 0 0 7 1 12 10-12 2 1 10 12 0 9 10 12 0 0 1 3 0 2 13 0 0 213 0 0 18 12 0 0 1 4 N= 4 N= 4 N= 1 N= 18 18	N= '1	*2 0 0 0 3 4 42 3 5 5 6 14 3 7 3 42 3 10 10 10 10 10 10 10 10 10 10 10 10 10
15°	N- A4	3-4 70 0 3-4 70 0 3-4 70 0 3-4 70 0 3-6 70 70 3-6 70 70 70 70 70 70 70 70 70 70 70 70 70	\$2 21 4
13	\$\frac{42}{34}\$ \$\frac{51}{26}\$ \$\frac{8}{2}\$ \$\frac{51}{32}\$ \$\frac{8}{2}\$ \$\frac{70}{9}\$ \$\frac{9}{2}\$ \$\frac{10}{3}\$ \$\frac{9}{3}\$ \$\frac{10}{3}\$ \$	52 000 52 208 50 263 52 205 54 73 5 54 4 2 54 312 54 280 55 207 56 54 2 55 158 55 72 0 69 67 79 12 9 184 79 20 5	N= 14 15° \$2 14 3 3 4 42 9 5 6 14 3 7-9 25 6 10 12 0 0
	- \frac{\cappa = 56}{\cappa = 2 63 8 + \cappa = 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	+ 100 1 101 101 101 101 101 101 101 101	N= 7 S2 25 9 3 4 40 7 5-5 14 8
	5-6 149 76 0.0 5-6 00 7-9 64 7-9 0.0 7-3 00 10-12 00 19/12 1000 10-12 00 -13 00 413 00 -13 00 -13 00 5-6 00 3-4 00 3-4 00 3-6 00 5-6 00 3-7 00 5-6 00 3-7 00 5-6 00 3-8 10 10 10 10 10 10 10 10 10 10 10 10 10	34 41 7 34 14 3 34 00 34 190 3-4 200	≥13 0.0 N= 27 ≈2 35.3 3.4 14.7
	10 12	3-4 00 3-4 66 3 4 20 0 3-4 26 7 4 25 9 5-6 00 5-6 13 4 5-6 40 0 5-5 26 7 5-6 18 5 7-9 00 7 9 67 7-9 00 7-9 23 3 7 3 22 2 10-12 00 10 10 12 6 7 10 -12 00 10 7 3 3 10 12 11 1 213 00 213 00 213 00 213 00 213 3 3 213 00 1	16 12 11 8 ≥13 0 0 N≈ 34
	N= 4,	\$\begin{array}{c c c c c c c c c c c c c c c c c c c	13-12 0 0 213 3 2 N= 31
20°	*2 50 0 7 3-4 0 0 5-6 50 7 7 9 0 0 10-12 0 0 2-13 0 0 N= 2	3-4 0.0 5-2 33 3 5-2 0.0 5-2 36 4 5-2 45 5 5 5-2 13 9 5 5-6 0.1 5-6 50 5-6 50 5	*2 20 5 3-4 30 5 5-6 13 6 7-9 22 0 10-12 11 9 #13 1 7 N= 54
	45°	E 50°	55°

		35°		40°	
20°		52 24.2 T 52 3-4 30.3 3-4	13 3 1 52 22.8 1 52 19.9 33 3 3-4 17.5 3-4 25.5 6.7 5-6 25.4 5-6 21.4	1 52 25 2 52 32.3 52 26 8 3-4 31.3 3-4 27 4 3-4 29.3	1 62 40.0 3-1 20.0 20°
	WAVE HEIGHT - FREQUENCIES	5-6 15.2 5-6 7-9 27 3 7-9 10-12 0 0 10-12 313 3.0 \$13	16.7 7-9 21.1 7-9 21.7 0.0 10-12 1.1 10-12 7 9 0.0 ≥13 86 ≥13 3.5	5-6 13.0 5 6 16 1 5 6 29.3 7-9 26.1 7-9 16 1 7-9 14.6 10-12 4.3 10-12 4.8 10-12 0.0 413 0.0 ≥13 3.2 ≥13 0.0	5-6 20.0 7-9 0 0 10-12 0 0 413 20 0
	PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE - DEGREE QUADRANGLES	F N= 33 + N= \$2 23.3 \$2 3-4 32.6 3-4 5-6 16.3 5-6	15 6	+ N= 115 N= 62 + N= 41 \$2 20.9	+ N= 5
	Height Percent ≤2 100 - 3-4 200	413 47 ≩13 1	31.3 7-9 25.8 7-9 16 1 12.5 10-12 7 6 10-12 5 6 3.1 ≥13 5.3 ≥13 5 0 32 + N= 357 + N= 161	7-9 23 3 7-9 18.2 7-9 0 0 10-12 0.0 10-12 3.9 10-12 0.0 213 26 213 0 0 + N= 43 N= 77 N= 9	7-9 0.0 10-12 0 0 ±13 0 0 + N= 3
	5-6 300 7-9 200 10-12 100	3-1 39.2 3-4 5-6 17 6 5-6 7-9 17 6 7-9 10-12 2 9 10 12	12.9 \$2 16.5 \$2 10.2 15.0 3-4 20.4 3-4 21.4 24.5 5-6 23.3 5-6 31.6 31.6 7-9 21.6 7-9 23.5	\$\frac{1}{3}\cdot 2 21 6 \frac{1}{2}\cdot 2 15.6 \frac{1}{2}\cdot 2 33 3 34 29.4 31.3 34 31.3 34 0.0 \\ \$56 196 6 5-6 26.6 5-6 33 3 \\ \$7-9 23 7 20 3 7-9 33 3 \\ \$10-12 3 9 10-12 4 7 10-12 0.0 \end{align*}	\$2 66.7 3-4 0.0 5-6 33.3 7-9 0.0 10-12 0.0
	≥13 10 0 N = 1363 EXAMPLE: 30 0% OF ALL WAVE	*13 29 *13 + N= 34 + N= 13 6 *2 3-1 19 5 3-4	94 ≥13 6.9 ≥13 3 1 233 + N= 275 + N= 98 138 +2 9.3 +2 9.7	+13 20 413 16 413 00 + N= 51 N= 64 N= 3 + \(\) \(\	¥13 0.0 N= 3 + ≤2 50 0 3-4 50.0
	HEIGHTS WERE IN THE RANGE 5 • 6 FEET. N = OBSERVATION COUNT.	5-£ 23.0 5-6	20 1 3-4 31 8 3-4 30 6 21.4 5-6 22.4 5-6 22 2 27 4 7-9 19 6 7-9 23 6 11.7 10-12 10 3 10-12 11 1 5 5 213 6 5 213 2 8	3-1 2/9 3-1 31 0 3-1 0 5-6 5-6 5-6 5-6 5-6 5-7 9 55-6 5-7 9 13 6 7-9 55-6 5-7 9 55-6 5-7 9 55-6 5-7 9 55-6 5-7 9 55-6 5-7 9 5-7 9 5-7 9 5-7 9 5-7 9 5-7 9 5-7 9 5-7 9 5-7 9 5-7 9 5-7 9 5-	5-6 0 0 7-9 0.0 10-12 0.0 213 0 0
	WAVE DATA FOR THESE TABLES WERE SELECTED FROM THE HIGHER OF SEA OR SWELL WHEN BOTH WERE REPORTED	F \$2 11.8 + 12.7 + 52 3-4 11.8 3/4 20.3 3-4	383 + N= 107 + N= 72 11 8 + 22 17 5 + 22 16 1 22.9 3-4 22 3 3-4 33 3	+ N= 61 N= 22 + N= 2 \$2 39.5 \$2 25.0 \$2 8.3 3-4 15.4 3-4 25.0 3-4 25.0	+ N= 2 52 23.1 3-4 23.1
0.50	WEILE HEI OMES		22.9 5-6 28.2 5-6 14 3 26 4 7-9 21.4 7-9 21.4 4.9 10-12 7 8 10-12 14.5 11.1 \$13 2.9 \$13 0.0 144 N= 10.3 N= 56	5-6 15.4 5-6 12.5 5-6 33.3 3 7-9 15.4 7-9 25.0 7-9 25.0 10-12 15.4 10-12 15.5 10-12 0.0 13.8 3 1.5 10-12 10.0 12.5 10-12 10.0 12.5 10-12 10.0 12.5 10-12 10.0 12.5 10-12 10.0 12.5 10-12 10.0 12.5 10-12 10.0 12.5 10-12 10.0 12.5 10-12 10.0 12.5 10-12 10.0 12.5 10-12 10.0 12.5 10-12 10.0 12.5 10.0	5-6 23 1 7-9 23.1 12-12 00 213 77 N= 13
25°	3-1 10.0 3-10.7 5-6 10.0 2-9 25 9	\$2 13 0 \$2 13 5 \$2 3-4 21 5 5-4 17 4 3-4 5-6 20 7 5-6 25.7 5-6	11 2	\$2 42 \$2 50 \$2 100 3-4 292 3-4 200 3-4 00 5-6 333 5-6 200 5-6 400	52 1.4 3-4 15 4 5-6 38 5
	10-12 00 10-12 7.4 \$13 00 ≩13 00 82 10 N= 27	10-12 11 4 10-12 8.7 10-12 ≥13 5.7 ≥13 9.7 ≥13 N= 246 N= 288 N=	9 8 10-12 11 0 10-12 10 3 2 4 #13 0 0 #13 0 0 125 N= 82 N= 29	10-12 20 8 10-12 15 0 10-12 30 0 213 00 213 00 313 00 N= 24 N= 20 N= 10	10 12 77 ≥13 0 0 N= 13
	3-4 3-7 3-4 24 5 3-4 3-7 3-4 24 5 5-6 42.1 5-6 28 2 7-9 12 6 7-0 20 0 10-12 0 0 10-12 9 1	\$2 9 3 \$2 15 6 \$2 3-4 16.7 3-4 16.5 3-4 5-6 25.2 5-6 22 0 5-6 7-9 29 3 7-9 33 0 7-9 10-12 10 4 10-12 7 3 10-12	13 3 \$2 9 4 \$2 25 0 21.2 3-4 25 0 3-4 18 8 26.5 5-6 25 0 5-6 12 5 23.9 7-9 19 8 7-9 25 0 12.4 10-12 18 8 10-12 18 8	52 11 1 52 60 7 52 9 S 3-4 22 2 3-4 24 0 7 4 25 4 5-6 33 3 5-6 36 0 5-6 20 6 7-9 16 7 7-9 16 0 7-9 23 4 10-12 16 7 10 12 16 0 10 12 7 9	\$2 55 3-4 202 56 275 7-9 33 0
	8:3 0.0 2:3 55 N=	±13 9 5 ≥13 5 5 ±13 + N= 365 N= 109 + N= ±2 11.1 ≤2 88 ±2	27 ≥13 31 ≥13 00 113 + N= 32 + N= 16 103 + ≤2 167 + ≤2 11 1	#13 00 213 00 213 127 N= 18 N= 25 N- 63 #2 138 #2 128 #2 119	*17 77 N- 109 + s2 86
S	3-4 35 8 3-4 17 3 5-6 33 5 6 24 3 7-9 11 5 7-9 28 9 19-12 6 2 10-12 13 6	7-9 33 \$ 7-9 30 ; 7-9 10-12 8 ; 10-12 12 4 10-12	28 2 3-4 8 3 3 4 15 6 15 4 5-6 19 4 5-6 23 3 33 5 7-9 36 1 7-9 34.4 10 3 10-12 16 7 10-12 13.3	3 4 14 7 3-4 18 4 3 4 16 1 5-6 17 4 5-6 17 0 5-6 16 3 7 4 33 0 7 9 29 8 7 3 32 5 10-12 18 3 10 12 15 6 10 12 10 6	3 4 10 9 5 6 24 1 7 9 33 3 10-12 15 5
	#13 / 1 5 = 13 / 8 + N= 65 + N= 346 - 52 50 0 #2 5 9 + 52 12 3 3-4 0 0 3-4 20 2 3-4 14.2	3-4 18 4 3-4 14 3 3-4	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	+13 28 213 64 313 109 + 109 N= 141 N= 160 52 83 \$2 98 52 17 34 120 3-4 61 34 101	+ 13 75 N 174 + 52 10 3 3-4 11 5
	56 50 0 5-0 19 4 5-6 20 6	7-9 27 9 7-9 35 4 7-9 10-12 12 9 10 12 11 6 10-12 213 4 5 213 3 4 213	18 8	5-6 30 ; 5-6 23 7 5-6 23 3 7-3 22 6 7 32 3 7 4 37 ; 10-12 17 3 10-12 14 9 10-12 14 9 413 9 8 413 8.5 413 7 8	5 6 17 2 7 3 41 4 10-12 3 2 213 10 3
	N=	+ N= 201 N= 147 N= \$2 84 \$2 63 \$2 34 21 8 34 15 6 34 5-6 10 1 5-6 26 h 5-6	149 + N= 129 + N= 97 108 + 52 84 + 52 14 1 194	N= 133 N= 164 N= 116 \$2 147 \$2 126 + \$2 17 3-4 165 34 16 1 34 15 5 56 165 56 218 57 169	+ N- 8/ 52 11 9 3 4 14 3 5-6 25 2
200	9 30 2 79 34 2 7-9 27 8 5 12 15 7 10 12 15 5 10 12 17 2 44 10 , #13 128 #13 7 5 5 8 8 8 8 8 8 18 19 19 19 19 19 19 19 19 19 19 19 19 19	7-9 33 6 7-9 31 3 7 9	28 0 7 2 28 2 7-7 33 9 19 4 10-12 9 9 10 12 10 1 3 2 813 6 9 813 7 7 9 3 N= 131 N= 166	7 33 5 7 3 33 1 7 4 47 5 10 10 14 10 12 14 5 10 12 6 8 e13 4 6 e13 4 6 e13 14 3 N= 179 N= 87 N= 69	7
30°	52 57 52 59 52 3.4 34 12. 24 58 3.4 106 5-6 195 5+ 163 5-6 176 7-3 34 7 7 4 365 7 3 40 0	\$2 94 \$2 7 i \$3 3·4 94 3·4 14 9 3·4 5·€ 23 i 5·6 22,0 5·6	80 52 100 52 81 168 3-4 138 34 122 152 5-6 163 56 243	52 23 5 52 5 3 52 0 0 3 4 13 3 3 4 20 6 3 4 21 1 5 5 23 3 5 6 23 5 5 6 2 1	3-1 5 3 5 6 34 6
	10 12 18 ± 10 12 26 0 10 12 20 0 #13 9 ≠13 9 6 ₹13 2 4 N= 297	10-12 17 1 10-12 11 3 10 12 213 6 0 213 8 5 213 N= 117 N= 141 N=	16 i 10-12 15 0 10 12 16 2 3 5 ≩13 15 0 €13 4 1 137 L N= 80 L N= 74	7-9 23 5 7 3 29 4 7-9 21 1 10 12 6 7 10 12 8 8 10 12 21 1 213 10 0 213 11 8 213 1 8 1 30 N 30 N 10 10 10 10 10	7 9 42 i i0 12 5 3 #13 5 3
	\$2 65 \$2 58 \$2 49 3-4 116 3-4 73 3-4 177 56 152 56 183 5-6 171 73 362 73 342 7-9 341	'-9 35,7 7-9 35 3 7 9	28 52 40 52 100 13 9 3 4 28 0 3-4 20 0 16 7 5-6 28 0 5-6 20 0 44.4 7-9 24 0 7 9 25 0	34 77 3-4 174 34 114 3-6 77 56 25, 56 51 79 385 7-9 34 3 7 9 47	7 \$ 2 10 0 3-4 16 0 5 6 20 0 7 3 35 0
	10-12 11 6 0-12 21 10-12 13 4 213 18 6 213 12 1 213 12 8	10-12 16-3 10-12 17-6 10-12 413 82 413 10-3 413 + N= 98 N= 68 + N= 52 00 \$2.70 \$2.	13 9 10-12 8 9 10 12 20 9 8 3 8 13 8 9 8 13 5 0 3 5 N= 25 N= 20	10 12 15 4 10 12 8 7 10 12 17 6 21 7 15 4 21 4 7 21 11 8 N= 10 N= 20 N= 17	10 12 20 0 #14 5 0 # 4- 20 # 50 8 8
	3-4 12 0 3-4 15 5 3-4 8 0 5 6 14 3 5-6 15 3 5 6 26 0 7 3 3-5 6 7-9 37 6 7-9 38 0	3-4 98 3-4 70 3-4 5-6 195 56 11 6 56 7-9 36.6 7-3 30 2 7 9	53 34 205 34 75 289 5-6 128 5-6 4-3 395 7-9 410 70 34 1	34 36 34 142 34 194 56 107 56 112 56 65 74 464 79 33 5 7-0 203	3-4 11 3 5 6 17 6 7 9 26 5
	10 12 20 € 15-12 16 5 10 12 14 0 213 14 3 213 82 213 14 9 N= 175 N= 85 N= 50 52 1 € 52 20 52 47	#13 12 2 #13 20 9 #13 N= 41 N= 43 N=	79 #13 103 #13 98 -38 N= 39 N= 41 182 "52 53 52 52 9.	. 4. 17. 4.3 12.1 4.3 19.4 1014. 10. 4.3 14.4 15.4 15.4 15.4 15.4 15.4 15.4 15.4	10 12 25 5 *13 11 5 *4 44 *5 6 7 7
	3-4 3-2 3-4 10-0 3-4 14-0 5-5 22-5 5-5 12-0 5-5 16-3 7-3 37-1 7-5 34-0 7-9 27-9 10-12 21-0 16-12 18-0 16-12-20-9	54 156 34 97 34 56 467 56 00 5-6 79 244 79 546 79	70 34 H8 7-4 00 242 5-6 H8 5-6 H7 77 7 412 79 564 152 1012 20+ 1012 31	7 %2 100 %2 74 7 %2 42 34 35 37 4 7 % 34 17 7 6 7 6 17 7 6 7 6 7 6 7 6 7 6 7 6 7	(4 .43 3 5 6 .24 7 7 4 40 0 10 12 6 7
	- 65 H + 25 56 25 15 8 N- 65 N- 50 N- 43 N- 65 N- 50 N- 43	#13 15 5 4:3 16 4 #13 No. 45 No. 31 No. + \$2 26 \$2 91 \$2	61 #13 11 8 #13 31 8 33 N+ 34 N= 22 81 52 100 52 65	*** 10.0 #13 22.2 #13 15.1 N 30 N= 21 N 24 *** 82 87 \$2 85 * 82 10.5	+ 13 67 5 + 15 15 + 15 3 3
		5-6 12 h 5-6 18 2 5 6 *-3 33 3 7 3 39,4 7 9 10 12 12 9 10-12 12 4 10 12	16 2 3 4 3 3 3 3 4 1 1 2 1 6 5 6 26 7 5 6 16 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
35°	eit is 7 eit 105 eit 5. No 31 No 38 No 39	e13 25 f e13 9 1 e13 N= 39 N= 33 N=	35 8(3 33 813 15) 37 1 N= 30 1 N= 36	#17 13 3 #17 12 9 #17 5 5 1 N= 30 N= 31 1 N= 3#	35°
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		45°	50°	55°
20°	\$2 100 01 3-4 6 0 5-6 0 0 7-9 0 0 16-12 0 7		\$2 43 \$2 200 \$2 14.5 \$2 200 \$2 69 \$2 22.7 \$3 3-4 57 3-4 450 3-4 0.0 3-4 286 3-4 41.4 3-4 22.7 3-5 56 0.0 56 420 5-6 286 5-6 10.3 5-6 13.6 5-6 7-9 286 7-9 0.0 7-9 429 7-9 429 7-9 31.0 7-5 31.8 7-6 10-17 0.0 10-12 0.0 10-12 0.0 10-12 0.9 10-12 6.9 10-12 45 1	20°
	10-12 0 7 213 0 2 N= /2+	J.	1-4 41 7 3-4 10 0 3-4 9 1 3-4 16 7 3-4 70 3 3-7 3 3-4	2 79 3 0.0 = 38 2 22 9
		r	7.6 & 3.5 5.6 30.0 5.6 33.3 5.6 23.3 5.6 23.3 5.6 30.9 5.6 27.9 8.3 7.9 20.0 7.9 16.7 7.9 43.3 7.9 30.0 7.9 20.6 7.9 (0.12 0.0 10.12 0.0 10.12 33.0 10.12 0.0 10.12 6.6 10.12 13.0 0. 413 0.0 413 0	22. 9 18.5 2 5 0
	3-1 00 3-1 00 5-6 1000 7-9 00 10-12 00 213 00	,	7-9 00 7-9 20 0 7-9 20 0 7-9 45 9 7-9 20 4 7-9 24 7 7-9 23 4 7-9 10-12 00 10-12 00 10-12 27 10-12 61 10-12 33 10-12 98 10-12	21 6 5 19 2 3 33.4 2 11 4
	- 55	F ≦ 3 5, 7,	2 0.0 54 221 16 4 52 122 52 16.7 52 125 52 143 52 149 52 14 52 14 54 52 125 52 149 52	= 167 2 11.4 1 22.2 5 22.2
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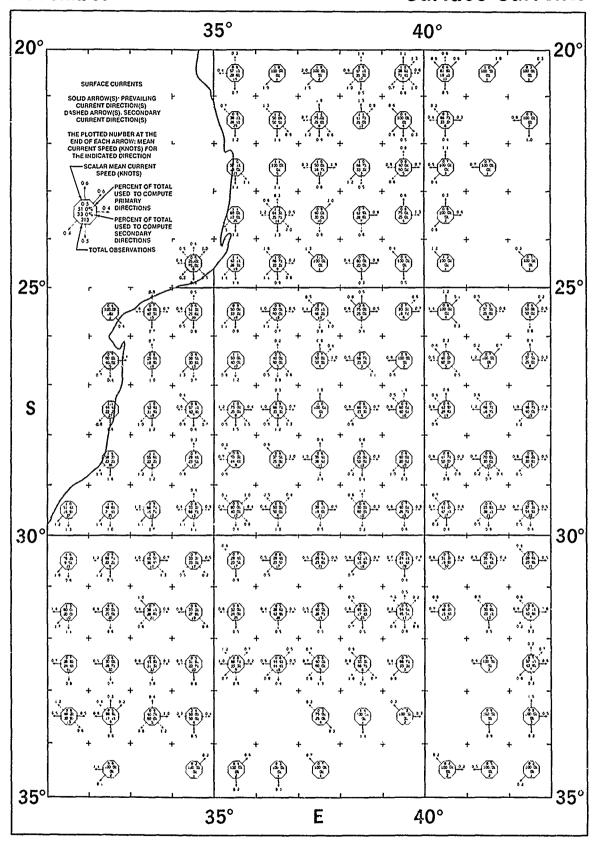




December

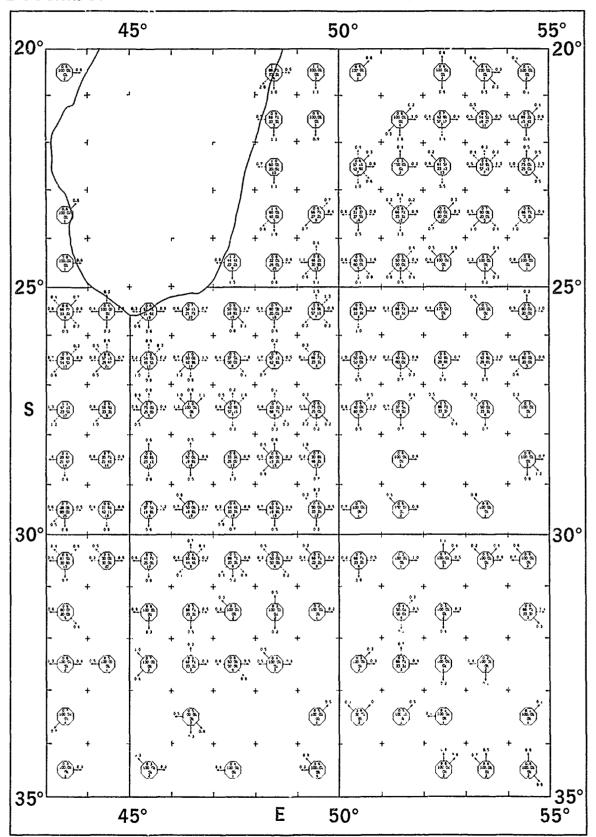
Surface Currents

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December

Surface Currents



Station Climatic Summaries

The following Station Climatic Summaries are based on data from many different sources, with most stations having variable periods-of-record. Considerable effort went into making these data as compatible as possible for each station. However, for some stations a more recent shorter period-of-record was selected over a longer period because the shorter record is more representative of the current climate. Also, in some instances, the station periods-of-record were mixed because only one period-of-record source could be found for a given element. For example, the mean daily maximum and minimum temperatures for a given station may have been based on a period other than that for the mean temperature because of incomplete data records. This practice sometimes gives inconsistencies in the summarized data set.

Station relocations and varying periods-of-record also introduce inconsistencies. For example, inconsistencies often appear when comparing absolute maximum temperatures from one period-of-record with the total number of days above a given threshold from another period.

Ideally, these Station Climatic Summaries should be generated from a relatively consistent long-term digital station data base. Unfortunately, that is not possible for most foreign-reporting stations at this time.

Station summaries were sorted into a rough geographical sort for Tanzania, Mozambique and Madagascar and appear in the following order:

STATION	PAGE#	STATION	PAGE#
Tanga, Tanzania	315	Analalava, Madagasca	r 322
Dar es Salaam, Tanzania	315	Antalaha, Madagascar	322
Mtwara, Tanzania	316	Majunga, Madagascar	323
Porto Amelia, Mozambiqu	ie 316	Besalampy, Madagasca	ar 323
Mossuril, Mozambique	317	Maintirano, Madagaso	ear 324
Quelimane, Mozambique	317	Tamatave, Madagasca	r 324
Beira, Mozambique	318	Morondava, Madagaso	ear 325
Nova Mambone, Mozambi	ique 318	Mananjary, Madagasc	ar 325
Vilanculos, Mozambique.	319	Farafangana, Madagas	scar 326
Inhambane, Mozambique	319	Morombe, Madagasca	r 326
Maputo, Mozambique	320	Tulear, Madagascar.	327
Moroni, Comoro Is	320	Fort Dauphin, Madaga	scar 327
Diego Svarez, Madagasca	r321	Faux Cap, Madagasca	
Nossi-Be, Madagascar			

STATION NAVE: TANA, TANZANIA LOCATION: 05 060 39 04

ELEVATION: 115 FEET

KYO #: 63844

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[#] LESS THAN 0 5 DAYS. 0 5 OR 0 05 THEN, OR U . PERCENT AS APPLICABLE

TANGA, TANZANIA

PREPARED BY: NOCO ASHEVILLE

STATION NAME: DAR ES SALAAM, TANZANIA LOCATION: 05 53S 39 12E

ELEVATION: 190 FEET

KMD #: 63894

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THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEDDED ONLY 0.75 % OF THE TIME WHEN LABELED 99 95% OTHERWISE IT IS THE MEAN

EYR IS EQUEVALENT YEARS OF RECORD 41 E. THE ACTUAL NUMBER OF YEARS JILLIZED IN THE CACULATIONS +

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.05 % OF THE TIME WHEN

EYR IS EQUIVALENT YEARS OF RECORD IT E. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS 3.

STATION NAVE: MINAPA, TANZANIA LOCATION: 10 16S 40 11E

ELEVATION 371 FEET

k¥9 ‡ 63971

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[#] LESS THAN 0 5 DAYS, 0 5 CR 0 05 INCH, OR 0 5 PERCENT AS APPLICABLE

LABELED 99 95% OTHERWISE IT IS THE MEAN

EYR IS EQUIVALENT YEARS OF RECORD (I.E. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS)

MTWARA, TANZANIA

PREPARED BY: NOCO ASHEVILLE

STATION NAME - PORTO AMELIA, MOZAMBIGUE LOCATION: 12 588 40 30E ELEVATION: 161 FEET

KY3 #: 67215

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[#] LOSS THAN 0 % CAYS, 6 % OR 3 0% INCH. OR 0 % PERCENT AS APPLECABLE

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0 05 % OF THE TIME WHEN

THE VALUE LESTED UNDER PRESSURE ACTITUDE INDICATES THAT VALUE IS EXCERCED ONLY O OF THE TIME WILL

LABELED BY YES OTHERHISE IT IS THE HEAN

ETR IS EQUELALENT YEARS OF MECORD IN E. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS !

STATION NAVE: MOSSUALL, MOZAMOTOUE LOCATION: 14 575 40 406

ELEVATION: 49 FEET

KYO #: 67241

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DEC	91		63	105	68		14 3	0.8	4 1	65	65		NΕ	3	4	6	4	8	- 4	0	11	٥	31		٥
ANN	87	70	79	104	53	l .	48 1	25 6	7 9	69	-65		SW	3	5	5	3	6.4	- 1	٥	57	13	363		9
EYA	28	28	28	26	28	28	24	25	28	15	18		30	25	23	15	15	30	30	30	30	30	30		30

LESS THAN 0 5 DAYS, 0 5 OR 0 05 INCH, OP 0 5 PERCENT AS APPLICABLE

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.05 % OF THE TIME WHEN

LABELED 99 15% OTHERNISE IT IS THE MEAN

EYR IS EQUIVALENT YEARS OF RECORD IT E. THE ACTUAL NUMBER OF YEARS UTERIZED IN THE CACULATIONS >

MOSSURIL, MOZAMBIQUE

PPEPAPED BY: NOCO ASHEVILLE

STATION NAME: GLELIMANE, MOZAMBIGLE LOCATION: 17 538 35 53E

ELEVATION: 20 FEET

KY3 #: 67283

	1	EMPE	RATE	RE 1	٢)	-	PECI	PITATI	ich t	NOH	S)		FELA	IVE				ŜŲ:	RF#CE		- XX	Y	ean nyeer	? SF	Q4YS	WITH		
		YEAN	S	EXI	PEYE					57	k A	.L	HUY][)[TY	SOME	1 1 1 1		CAIN	IKT		31 12	PRECI	PITATION	4	96	TE	cera:	1646
	нахінцн	HINIHUM	AVERAGE	MAXIMUM	MINIMA	MEAN	MAXIMUM	MINIMOM	24-48 MAXINUM	#(Ah	HAXIMUM	24-HR MAXEMUM	151 (-)	1530 651	TAPOR PRE	4 U A	PRESSURE AL	V01123810	0,5660	MAX SUST	MEAN CLOUD ANGING	. 9 004	SNOWFALL	THUNDERSTORMS	VISIBILITY ALOUCED BY F		with the state of	
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LESS THAN Q S DAYS. Q S ON Q OS ENCH, OH Q S FERCENT AS AFFLECABLE

THE VALUE LISTED UNDER PHESSURE ALTITUCE INDICATES THAT VALUE IS EXCEDED ONLY U OS % OF THE TIME HIGH

LABELED BY 95% OTHERHISE ET ES THE HEAN

EYR IS EQUIVALENT YEARS OF RECORD IS E. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS (

STATION NAME: BETHA, MOZAMBIQUE LOCATION: 19 505 34 51E

ELEVATION: 23 FEET

KMO 1 67297

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		ICH.)	LAI	PLIKE		110	15.31	,	non	ויוטו		DIREC	TION	SPECO	10×1	A\$1	P	uu.	PITATION	\$	90	1	IS TH	ATURE	
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ANN	84	69	77				1 ''	32 3	14 4	76	66	68	٤	S€		5	2	84		٥	30	22	321		٥	
EYR	30	30	57	30	30	57	57	57	30	20	50	35	30	30	30	30	30	30		39	20	30	30		30	. [

[#] LESS IMAN O 5 DAYS, O 5 OR O O5 INCH. OR O 5 PERCENI AS APPLICABLE

BEIRA, MOZAMBIQUE

PREPARED BY: NOCO ASHEVILLE

STATION NAME: NOVA MAMBONE, MOZAMBIQUE LOCATION: 20 595 35 DIE

ELEVATION: 13 FEET

WMO #: 67303

	I(] [RAT(RE I	ſ1	1	PRECIF	PITATI	ON I	NCH	(S)		RELA	TIVE				Sť	FACI	<u></u>	MTHS		K	an number	? Of	DAYS	WITH			
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	яахіяця	HINIHUH	AVERAGE	MAXEMUM	MINIMOM	HEAN	MAXINUM	HUHINIH	24-HR MAXINUM	HEAN	HAXINLM	24-HR MAXINUM	181 0860	1530 151	VAPOR PRE	100	PRESSURE AL FEET IME	DIRECTION	39680	HAX GUST	MEAN CLOUD AMOU	>= 0 004		SNOWFALL	THUNDERSTORMS	VISIBILITY				
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OEC ANN	85	65							12.5				70	68	ļ							76								1
EYR	26	28		1		1			26				13	13								13							l	

[#] LESS THAN O S DAYS. O S OR O OS INCH. OR O S PERCENT AS APPLICABLE

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.05 z of the time when labeled 99 95% otherwise II is the hean

EYR 15 EQUIVALENT YEARS OF RECORD AT E. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS A

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.05 % OF THE TIME WHEN

LARELED 99 95% OTHERHISE IT IS THE HEAR

EYR IS EQUIVALENT YEARS OF RECORD (1 E THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS 1

STATION NAME: VILANCULOS, MOZAMBIQUE LOCATION: 22 00S 35 19E

ELEVATION: 65 FEET

KYO I: 67315

	I	EKPEI	RATU	RE 11	1)	þ	RECH	PITATI	ON E	NOHE	S)		RELA	IVE				SU	RFACI	[ENTHS		ΥE	an nager	OF	DAYS	WITH	1		
		YEAV	S	EXI	REKE					SV.	KFAL	<u>.L</u>	HANI	H	SSURE	316		KIN	(KI		=1	PR	ECIP	HATICY	¥.		IE	MPER	ATURE	
	HAXIBUR	HINIMUM	AYERAGE	нахінен	HINIHUR	HÉAN	HAXINUH	HINIHUM	24-HR MAXINUM	HEAN	наліния	24-HR PAX HUM	187 0860	1530 151	VAPOR PRE	104	PRESSURE AL FEET CHE	DIRECTION	SPEED	3	HEAN CLOUD AMDON	>= 0 00¢		SNOWFALL	THUNDERSTORMS	VISIBILITY				
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MAR	87	1							5 6	!!			72	67								11								
APR	85	68	76	91	55	1 6			19				71	67							ı	6								
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JUN	76	1		1 1	40				3 7				74	66							ı	,							ı	
JUL AUG	76 76	1			45 47	1 1			2 0				74	66																
SEP	90) 1							3 0	ł			68	67								4								
001	83			!!		1			5 5	1			68	69								4								
NOV	85	72	78	97	55	2 9			10 2				68	69								6								
DEC	86	73	79	97	60	5 6			5 6				70	70							ı	9								
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[#] LESS THAN 0 5 DAYS, 0 5 OR 0 05 INCH, OR 0 5 PERCENT AS APPLICABLE

VILANCULOS, MOZAMBIQUE

PREPARED BY: NOOD ASIEVILLE

STATION NAME: INHAMBANE, MOZAMBICLE LOCATION: 23 525 35 23E

ELEVATION: 46 FEET

kY) #: 67323

	I	MPEF	RATC	PE 11	F)	Į	RECI	PITATI	(1 1)	NCHE	SI		RELAT	IVE		ŞI	AFACI	[MEAN	CLÇVO		Υŧ	an Nuyeer	CF	DAYS	KI IH		
	ł	EAN!	S	EXI	REME					ŞI	ONFA	ll	KMI	111	Ç.	KI)	9 (K)	S)	AMO	1.HS1	FPE	(IP	ITATIEN	¥	. Afonces 00	IEI	PERATU	HE.
	HAXIHUH	HINIBUB	AVERAGE	нахінин	HINIFUH	MCAN	HAXIRUR	MINTHON	24-HR MAXINUM	HEAN	HAXÍBUF	24-48 MAX MUR	0930 LS1	1530 457	1V100 H30	10#49#afG	Ø33d\$	MAK GUST	187 0060	1500 051	>. 0 04		SNOWFALL	THUNDERSTORMS	VISIBILITY AED BY FOG		HAX > 77	HEN >c 68
JAN	88	74	82	97	64	60	17 2	6.2	5 6				20	4.	67	32	5	34	В	7	,	-	0	4	٥		31	30
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APR	65	70	75	94	60	2.6	, 2	0 2	5 0				73	62	45	58	4	46	*	ŧ	· ·		. ^ !	5	0		24	22
MAY	81	65	73	92	54	2.2	9.2	0.4	4 9				77	1.5	65	N, ₩	4	40		- 5	ŧ		0	1	,		28	1
JUN	78	62	68	91	48	5.5	8.2	n a	+ +				80	62	54	<sh< td=""><td>4</td><td>47</td><td>4</td><td>٠.</td><td>-</td><td></td><td>٥</td><td>,</td><td>, ,</td><td></td><td>19</td><td>19</td></sh<>	4	47	4	٠.	-		٥	,	, ,		19	19
JUL	78	61	6.8	84	50	7.4	8 2	00	3 5				79	61	5×	454	4	•0	4	5	6		n	,	3		16	9
AUG	78	62	69	40	50	1 2	6, 3	0.0	+ 2				76	€.2	58	٩E	4	17		1	4		0	,	١,		₹0	1 1
43c	81	65	72	94	54	1 0	5 9	0.0	1 1				7.0	64	51	NE	ŕ	'4		*	1		٥	'	1		24	1 4
OCY	63	6.6	**	93	57	3.4	3 3	ų s	1 8	1	1		6b	5, ¢,	63	٩٤	. K	44		. '	3		Ų	,	1		24	1 .1
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EYR	30	31	40	30	30	31	4	40	30				50	50	21	21	21	50	30	10	30		-21	31	30		30	<u></u>

FLESS THAN O 5 DAYS, O 5 OR O OS ENCH. OR O 5 PERCENT AS APPLICABLE

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0 05 % OF THE TIME WHEN LABELED 99 95% OTHERWISE IT IS THE MEAN

EYR IS EQUIVALENT YEARS OF RECORD LLE. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS 2

THE VALUE LISTED UNDER EPESSURE AL'ITUDE INDICATES THAT VALUE IS EXCECCED ONLY U OF % OF THE TIME WHENL

LABELED 99 95% OTHERNISE IT IS THE MEAN

ETR IS EQUIVALENT HEARS OF RECORD IT E. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACHEATIONS !

STATION NAME: MARUTO, MOZAMBIQUE LOCATION: 25 56S 32 365

ELEVATION: 197 FEET

KYO #: 67339

	Ī	K2[[ATU	RE 11	F)	Př	ECIPI	TATIC	4	RELA	ATIVE				SUBFACE		HEAN (-	ean maer	? OF	DAYS	HIIK		
		ERV	5	EXI	EKE		(IM	HESI		HOM	DITY	ESSURE BERCUR	1 16 1	H	in) ikis		AMOUNTE	LNIHSI	PREC	IPITATION	SH SH	اور	TEM	PERA	TURE
	HAXINUM	HINIHOH	AYERAGE	HAXIMUM	MINIMUM	nean	HAXIHUR	HINIRUR	24-ий МАХІНЦИ	151 0060	150 0051	VAPOR PRE	2	DIRECTION	SPEED	HAX GUST	151 0060	2100 151	> 0 04	SNOWFALL	THUNDERSTORM	VISIBILITY . 7 HI IN FOG		>2 78	28 13
JAN	86	"	76	108	6.2	5 5	28 6	0 5	9 3	73	68		69	ε	10	35	;	5	4	0	5	٥		30	9
FEB	86	71	79	105	63	5 4	16 5	0 3	7 3	75	68		69	ε	9	32	,	5	4	0	3	۰		28	9 1
MAR	84	- 1	- 1	105	59		22 1	0 1	5 0	75	67		68	٤	,	42	6	4	1	0	3	٥	- 1	30	٩١
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FLESS THAN 0 5 DAYS, 0 5 OR 0 05 INCH. OR 0 5 PERCENT AS APPLICABLE

MAPUTO, MOZAMBIQUE

PREPARED BY: NOOD ASHEVILLE

STATION NAME: MORGNI, COMORD LOCATION: 11 42S 43 14E ELEVATION: 39 FEET

KYO #: 67601

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	нахінон	HINTHUM		AVERAGE	HANEMUM	HOMENEM	MEAN	HAXENDH	MOMINIM	24-48 HAXINUM	HEAN	HAKIMUM	24-HR MAXINUM			399 POAA.	100	PRESSURE AL FEET LMG	DINECTION	23395	HAX GUST	PEAN CLOUD ANDU	>- 0 004		SNOWFALL.	THUNDERSTORM	/1S1811117			The state of the s
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EYR	30	ł .	d	30	30	1	2	1))				}				Ì				Ì	30	1						

[#] LESS THAN O 5 DAYS, O 5 OH O O5 ENCH, OR O 5 PERCENT AS APPLECABLE

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEDDED ONLY O OS 2 OF THE TIME WHEN LABELED 99 95% OTHERWISE IT IS THE MEAN

EYR IS EQUIVALENT YEARS OF RECORD (I E THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS)

THE VALUE CISTED UNDER PRESSURE ATTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.05 % OF THE TIME WHEN LABELED 99 95% OTHERHISE IT IS THE MEAN

EYR IS EQUIVALENT YEARS OF RECORD (I C. THE ACTUAL NUMBER OF YEARS UTSLIZED IN THE CACULATIONS ?

STATION NAME - DIEGO SURREZ, MADAGASCAR LOCATION: 12 21S 49 18E

ELEVATION: 345 FEET

KMD # 67009

	I	EKSE	RATU	RE (I	1	1	PRECI	PITAT	(CV 1)	NCH	SI		RELA	IVE		Ş	UFFAC	 [KEAY	CLOUD		Y.	an number	R GF	DAYS	HIIH	
	_ }	KEAN	ŝ	EXI	EKE		,			S	ÛKE	NT.	EMI) I I Y	133	WI	9 (K)	SI	16K	evi IAS)	PR	ECIP	HATICS	ž	OCEO	TEMPI	ERATURE
	нахінин	HININUH	AVERAGE	KINENE KINIHUH		HÉ AN	MAXINUM	MINIMUM	24-HR HAXINUH	HE AN	MAXINUM	24-HR MAXINUM	0730 LST	1230 1.57	THEO POINT	DIRECTION	SPEED	MAX GUST	0300 151	1700 151	* 0 004		SNOWEALL	THUNDERSTORMS	VISIBILITY REDUCED BY FOG	۰, ۹٥	26 ->
JAN FEB	88 88			- 1	68 68	1		3 7					84 88		75 76	H	* 7		6	6	20		0	16 21		13	9
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HAY	88	1	. 1		66 61				1 1				76		72 69	1	10		3	5	7		٥	9		13	٩
JUN	86			: 1	61		i	,	i				76	. 1	65	€S€	12		,	4	4		٥	9		4	9
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NOV	87 89				65 66		2 4 6 8	1 1	10				68 73	50 55	67 70	ESE	16		3	3	5		0	9		13	1 9
OEC	89			1	68	1	19 3		- 1	,			80	l î	73	E	9		5	5	13		0	1		16	d
ANN EYR	87 27	72 27			58 27				20 0 30				77	59 6		€S€ 9	11		16	16	107 27		0 10	67		136	27

LESS THAN 0 5 DAYS, 0 5 OR 0 05 INCH. OR 0 5 PERCENT AS APPLICABLE

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEDED ONLY O US % OF THE TIME WHENL

LABELED 99 95% OTHERWISE IT IS THE HEAN

EYR IS EQUIVALENT YEARS OF RECORD 41 6. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS +

DIEGO SUAREZ, MADAGASCAR

PREPARED BY: NOCO ASHEVILLE

STATION NAME: NOSSI-BE, MADAGASCAR LOCATION: 13 195 48 196

ELEVATION: 35 FEET

MO #: 67012

	Ţ	EMP(RA	ĪΨ	E 18	· j	1	PRECI	PITATI	OV (NCH!	S 1		RELA	IVE		Ş	JAFAC	[MEAN	CLCuO		19	ean Number	} (F	DAYS	MITH		
	}	MEA'	iS		EXT	REYE.			†		Ş	VOWE	ILL.	Pemil)[]Y	<u> </u>	WIN	O (K	(S)	ICK	ioni Iasi	PR	ECIP	HAHION	4.5	0330	TEM	PERATU	બે[
	HAXIRUM	HINIMUR		AVERAGE	HAXIMUM	HINIHOH	MEAN	MAXIRUM	HUMINIM	24-HR MAXINUM	HEAN	MAXIMUM	24-HR MAXEMUR	0700 151	1200 451	DEN FOINT	OIRECTION	25.60	MAX GUST	0700 LSY	1700 RST	\$ 6.404		SVONFALL	THUNDERSTORMS	dispersive acoused by foc			
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FE8 MAR	87 88		3	81	94	68		36 a		4 7				96	73		พรพ พรพ	*		5	6	55			13	1			
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080	68	3	1	•1	96	6.8	14 6	37 0	5 7	5 4				90	7.		Nξ	3		۸.	- 6	21			16	0			
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LESS THAN O 5 DAYS. O 5 OR O C5 INCH. OR O 5 PERCENT AN APPLECABLE

THE VALUE CISTED UNDER PRESSURE ALTERIOR INDICATES THAT VALUE IS EXCELDED ONLY U US & OF THE TIME WHENLY

LABELED 99 95% OTHERHISE IT IS THE HEAM

EXR IS EQUITALENT YEARS OF RECORD IS E. THE ACTUAL NUMBER OF YEARS UTSLEZED IN THE CACULATIONS A

STATION NAME: AVALALAYA, MADAGASCAR LOCATION: 14 38S 47 46E

ELEVATION: 187 FEET

KMD #: 67019

\neg	16	MPE(VATU	E (1)	P	RECIF	PITATI	6N 1	INCHE	\$1		RELAT	IVE				SU	RFAC		(OKTAS)		KEA	n number	OF	DAYS	WI TH			
	1	EAV.	;	EXI	EKE					SK	WF AL	<u>L</u>	HEMIC	П	ESSURE	POINTEFS		WINS) (KI	SI		PRE	CIPI	TATION	H\$		TEN	PERA	TURE	
	HAXINUM	нінінон	AVEGAGE	HAXIMUR	изизнин	HEAN	HAXIHUR	HINIHUH	24-HR MAXINUM	HEAN	MAXINUM	24-HR HAXIBUR	0000 151	1500 151	VAPOR PRE	100	PRESSURE AL FEET CHE/	DIRECTION	SPEED	HAX GUST	HEAN CLOUD ANDUNT	>0 00 ×		NOXFALL	THUNDERSTORMS	A131817111				
JAN	87	73	80	97	67			4 5					86	69		Г					6	21			22			١		1
FE8	87	73			68 68	1 1	45 9	4 0	10 1				90 85	72 63							្ប	19			19	1 1			- 1	
MAR	90		81			1			3 9				79	54							2	6			10	1 1			- 1	
MAY	90		80		-		1		2 1				74	48							2	5			,	1				
JUN	87	68	78	94	59	0 2	4.0	٥٥	4 (73	45							2	1			(- 1	- 1	
301	87	67	77	93	61	0.2	3 7	00	1 0	1			70	41	1	[1		2	1			•					
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EYR	27			1		ŧ .	1	51	5	d		l	, 6	6							16	27			2	7				į

[#] LESS THAN O 5 DAYS, O 5 OR O O5 INCH. OR O 5 PERCENT AS APPLICABLE

EYR IS EQUIVALENT YEARS OF RECORD 41 E. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS >

ANALALAVA, MADAGASCAR

PREPARED BY: NOCO ASHEVILLE

STATION NAME: ANTALAHA, MADAGASCAR LOCATION: 15 00S 59 20E ELEVATION- 79 FEET

KMD #: 67025

	16	KPE	RATU	RE (1)	1	PRECI	PITATI	6N ()	NCHE	S)		RELAT	IVÊ				ĈŰ	FACI	£	OKTASI		KEAN NUMBE	R OF	DAYS	WITH		
	1	EAN	S	EX1	REME			* * * * * * * * * *		SV.	WFAL	L	H.MIC	HIY	SSURE	01NT (5)		MIC	(K)	SI	_	FRI	CIPITATION	Î		161	FERAT	LPE
	MAXIMUM	намания	PAERAGE	MAXÍMUM	HUMINIH	NE AS	HAXTHUM	HIMIMON	24-ын махұмия	HEAN	HAXIMUM	24-HS MAXZHUR	0630 656	1230 451	TANDH PRE	100	FEET CHE	01HECT10N	29660	MAX GUST	MEAN CEOUG AMOUN	\$00 0 ·	SNEWERL	THUNDERSTORM	VISIBILITY			
JAN	86	73	74	30	67	,, ,	9.9.	3 4	я э				40	73				(5		,	19		,,	1			
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[#] LESS THAN O S BAYNE O S OR O CS INCHE OF O S FERCENT AS AFFLICABLE

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.05 x of the time when labeled 99 95x otherwise IT is the mean

THE VALUE LISTED UNDER PRESSURE ALTERUGE ENGICATES THAT LABOUR AS EXCECCED ONLY O OF A OF THE TIME WHEN

LARGUED 99 35% OTHERWISE IT IS THE MEAN.

ETR IS EQUEVALENT YEARS OF RECORD IT E. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATEONS !

STATION NAVE: KAJANSA, HADAGASCAR Location: 15 40s 46 21E ELEVATION: 72 FEET

KYO #: 67027

	16	MPEI	alu	RE ([]		PRECI	PITAT	ion i	INCHE	SI		RELAT	IVE				SU	RFAC	 [(OKTAS)		KE	an number	? OF	DAYS	WITH	
	Ì	EAN	5_	EXI	REKE					940	WFAL	L	HMI)IIY	PRESSURE OF MERCUR	132		MINE	(KI	SI		PR	ECIP	LIATION	нS	90	TEXPE	RATURE
	HAXIBUH	MINITOR	AVERAGE	MAXIMUM	MINIMOR	M£AN	HAXIHUH	HININGH	24-HR HAXINUM	HEAN	HAXINUM	24-HE BAXIBUR	0000 151	150 0021	VAPOR PRE		PRESSURE AL FEET LME	DIRECTION	89160	HAX GUST	HEAN CLOUD AHOUNT	>< 0 004		snow all	THUNDERSTORMS	VISIBILITY REDUCED BY FU	06 *<	** 32
JAN	88	75	81	99	64	1 -	44 3	5 8					89	69		75		NH	7		4	20		٥	22		12	14
FEB MAR	88	75	81	97	69 68		30 6 40 7	1 2	7 4				91 89	72 64		76 76		NH E	,		1	18		0	21	٥	12	
APR	91	74	í		64		9 3		2 4				85	55		72		į	۱		3	12			11	0	13	111
MAY	84	70	80	95	59	0 4	2 3	٥٥	2 3				81	48		68		ESE	,		2	2		0	2	0	15	
JUN	87	67	27	93	57	، ه	2 6	٥٥	1 3				82	46		64		ESE	7		3	,		٥	٥	٥	12	
JUL	87	66	76		58	1	0 3	٥٥	0 3				78	44		62		ESE	8		2	1		۰	٥	٥	11	9
AUG	86	67	76		59		0.6	1 1	0 6				72	40		62		ESE	8		2	'		٥	٥	٥	13	9 1
SEP	90	69 72	79 81		60 63	0 9	0.6	00	"]		ļ		69 65	41 45		65 69		ese	9		3	,		٥	1	٥	14	191
NOV	90	75	82	100	64			1 1	3 3		ļ		75	57		73		NA NA	8		1	2		٥	14	0	16	191
DEC	89	75	82		68			1 1	8 1				85	66		75		NVI	,		3	15		ŏ	22	٥	15	
ANN	88	7,	00	100	57	58 6	106 0	39 5	14 3		J		80	54		70		ESE	7		4	88		٥	120		163	1 9
EYR	27	27	27	27	27	30	30	30	21				6	6		21		٩	9		10	27		22	10	26	22	27

LESS THAN 0 5 DAYS, 0 5 OR 0 05 INCH, OR 0 5 PERCENT AS APPLICABLE

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.05.2 OF THE TIME WHEN LABELED 99.952 OTHERWISE IT IS THE HEAN.

EYR IS EQUIVALENT YEARS OF RECORD (I E THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS +

MAJUNGA, MADAGASCAR

PREPARED BY: NOCO ASSEVILLE

STATICY NAVE: BESALAMPY, MADASASCAP LOCATION: 16 45S 44 29E

ELEVATION: 118 FEET

KMO #: 67037

-	I(] }	RAIL	RE 1	F)	f	PECH	PLIAT	ich ti	NOHE	<u>S1</u>		RELA	IVE			w	St	FFA0	£	(SRIN)		Y.	AN NUMBER	} (F	CAYS	WITH		
		EAN	ŝ	EXI	REME			,		SN	WFAL	<u>l</u>	ROMI)][Y	PRESSURE OF MERCURY	166)		MIN) (K	SI	5	PR	CIP	ITATION	¥8		161	PERI	ATUPE
	MAXINUM	HANIMUM	AYERAGE	НАКТИН	HINIMON	#£AN	HAXIBOR	MINIMOM	24-HR MAXIFUR	HEAN	HAXIMUM	24-HR MAXINUM	0700 151	1200 151	INCHES OF P		PRESSURE AL FEET AME	DIRECTION	35 C E O	MAX GUST	HEAN CLOUD ANDU	> 0 004		SNOWFALL	THUNDERSTORM	VISIBILIAY		***************************************	
JAN	89	73		1		17 0			14 9		-		91	6.9								18							
FEB	90	74		1		8 1			3 7				94	70								16							1
APR	92	1							, ,				43	56								5	1		1				
HAY	90	6.7	7.	94	56	0 3			0.6				90	47				,				•							1
JUN	88	63	76	•	52	0 1			٥١				90	42							Н	1					1		
JUL	88					1 1			0.4				91	41								1				1		1	1
AUG	89	64		4		• 1			0.3				87	36								,				ł			
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ANN	90	69	80	101	52	50 0			14 9				48	52								79							
£YR	27	27	27	27	27	27			6				6	٠								٧.							

LESS THAN O 5 DAYS, O 5 OR O OF INCH, OR O 5 PERCENT AS APPLICABLE

THE VALUE CISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0 05 % OF THE TIME WHEN

EABELED 99 95% OTHERWISE IT IS THE MEAN

EYR IS EQUIVALENT YEARS OF RECORD IN E. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS !

STATION NAVE: MAINTIRAYD, MADAGASCAR LOCATION: 18 03S 44 02E

ELEVATION: 82 FEET

1890 #: 67073

	IE	K2E1	RATU	RE 18	1	t	RECH	PHAT	1 49	NCHE	S)		RELAI	IVE				SU	RFAC	£	1481		KEAN	NUMBER	Gř	DAYS	HİİK			
	,	EAN	5	EXIE	EKE		,			SVE	XFAL	L_	HUMIC	IIY	SSURE			KIN	(K)	SI	INT FOR	PR	CIPLIA	ATTOM	ž		TEI	PER/	TURE	\rfloor
	HAXINUR	HINIHON	AVERAGE	HAXIHUB	HINIMUM	HEAN	нах 3 нон	HINIHOH	24-HR MAXINUM	HEAN	HAXIHUH	24-HR MAXINUM	0700 151	1500 651	VAPOR PRE	5	PRESSURE AL FEET LME	01REC110N	SPEED	HAX GUST	HEAN CLOUD AHOUNT	>< 0.004	SW	SWF ALL	THUNDERSTORMS	V151811.13				
JAN	86	74	- 1		66	- 1	1	3 4	10 7				91	72				51			6	18			16					٦
FEB	88	75	81	1 1	69		1 * * *						93	70				54	1	İ	9	15	1	1	16					- {
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MAY	85	[]			55		1		1 - 1				89	57				5 A			ן ו	,			,					ı
JON	82	65		- 1	52		1 2						87	54				SH			2	,			,					
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001	87	71		! '}	62		2 9	00	3.7				83	59				4	8		3	3			2					- 1
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EESS THAN O 5 DAYS, O 5 OR O 05 INCH. OR O 5 PERCENT AS APPLICABLE

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0 05 % OF THE TIME WHEN LABELED 99 95% OTHERWISE IT IS THE MEAN

EYR IS EQUIVALENT YEARS OF RECORD (1) E. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS >

MAINTIRANO, MADAGASCAR

PREPARED BY: NOOD ASHEVILLE

STATION NAME: TAMATANE, MADAGASCAR LOCATION: 18 075 49 24E

ELEVATION 16 FEET

MY) #: 67095

	I	MPE	RATURE (F) IS EXTREM			Pi	RECIP	IAII	N	RELA	HINE	DEH FORNYIFI	SURFA WINDS (ĈĘ LTC1		ME AN			MEAN NU	YEER	CF DF	YS H	1111	
)	EAN	Ŝ	EXTREME			(IN	HESI		H.M.	0111		DISCLIUM		((O	1081		PR	ECIPITATION	Š.	20	TE	PERATU	,9E
	HAXINUM	MINEMON	ALERAGE	MAXIMUR	MINIMOM	*6.45	MAXSHUM	PURRAIN	24-MR MAXEHUM	U730 LST	1230 LST		:	\$50.0360	1400 1-1	17.5 6.70	1,00 657	> 0 0.2	SNEWFALL	THUNDERSTORMS	*#5\$88L#TV *£00CE0 BY FI	30	33	36
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HOA	83	''		1	ŧ 3		36 8	3.5	14 H	5.8	*3		> H	10	11	۴.	5	[15]	"	,		7	- 1 <	٥
PAY	*ď	66		(^`¥	5, 4			ي ۽	6 1	3.5	74		· · · H	10	14	1	f	-21	n n	*		ų	- 1	3
JUN	"	6.4			5.2		30 4	, ,	′ 1	14	74		55#	ŧn.	7.8	*	5	<11	Ų.	,		^ }	- 1	٥١
JUE	76	**			5,5		1 1	3.6	1	14	74		,	15	14	1	*	1	P	*		٥	1	١
ALG	76	14		1	55		1	2.7	5 3	34	73		*	10	11	*	'	14	1 "	,		^]	1	١,
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001	80	66	1	i ' 1	59) '	1	0.6	1	30	71		€ .	7	12	٠,	•	11		11		0	1	0 1
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330	**	7.			ŧ 3	1	20 4	? 1	Ì	ж,	73			,	1.	*	,	-0	0	20		9	- 1 (٥
ANN	81	69		()			199 4	} !) ' '	42	73		•	•	1	5 -	1	244	0	47]	44	1	4
(YA		Ľ	۲۲	-31	2*	30	30	30	,,	_ '	- (18	20	20	1.3	23	1	1 50	10		30	20	1

I LESS THAN O S DAYS, O F OR O 35 THUM, OR O F PERCENT AS APPLECABLE

THE VALUE LISTED UNDER PRESSURE ACTITUDE INDICATES THAT VALUE IS EXCEDDED ONLY OLUSIS OF THE TIME WERL LABELED MM 953 OTHERWISE IT IN THE HEAM.

ETH IS EQUIVALENT TEARS OF RECORD IT & THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACILLATIONS &

TAMATAVE, MADAGASCAR

STATION NAME: MORONDAVA, MADAGASCAR LOCATION: 20 175 44 19E

ELEVATION: 26 FEET

K9 #: 67117

	I	[MPE	RATU	RE 1	FI	1	PRECI	PITAT	ON 1	NCH	S)		RELAT	TIVE		SVA	FACE	EAN	Crono		K	an number	? OF	DAYS	WI TH		
	}	YEAN	S	EXI	REKE			·		S	(OwF)	<u>ll</u>	HMI)IIY	ī	HIND	(KIS)	10K	DONT TAST	PR	ECIP	ITATION	32	o Jon	TEP	PERAT	URE
	MAXIMUM	HINIHUH	AVERAGE	HAXIMUH	HINIHUM	MEAN	HAXIHUM	HINIHUM	24-HR MAXIBUR	HEAN	MAXIBUR	24-NR HAXIMUN	0700 LSI	150 0021	DEN POINT	0700 (ST	151 00/1	0000 151	1300 181	>z 0 004		SNOWFALL	THUNDERSTORMS	VISIBILITY AEDUCED BY FOG	06 ^		26 *
JAN	89	74	82	101	63	9 2	24 2		9 8				89	66	74	£	н	5	5	13		٥	21	٥	16		9
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MAR	89	73 69	81 79		61 55	5 1	3 1	()	5 1				92	63	'	SE	H	1	1			٥	16	٥	76		9
HAY	86	63			52		1.8	[]	1 8				92	56 48		£	SH	3	2	2		٥	1	3	15		1
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JUL	82	- 1		92	44		0 9	0 0	0.6				89	45		ε	SH	5	1	,		0	d	3		1	9 1
AUG	83	60	21	93	49	Ċ i	0.6	٥٥	Λ 6				89	48	60	£	SH	2	,	,		c	,	9	,	j	9 1
SEP	85	64	74	100	53	0.2	7 8	٥٥	1 8				91	55	64	ε	SH	2		,		0	,	3	9	-	9
001	86		. 1		51	0 5	2 6	0.0	2 €				85	58	69	NE	SH	2	2	1		0	4		12	-	9
NOV	88	Ę			61			30	2 6				92	60		Nξ	SW	4	3	3		٥	13	٥	14	- [9
050	89	73	- 1		60		1 1	1 7	10 4				84		71	N	ŞH			9		٥	21	٥	16	- 1	9
ANN 573	87 27	67 27	- 1	i	27			1 1	12 3 27				89 6	56	67	14	5H 14	16	3 16	53 27		20	104	26	143		3

[.] LESS THAN O 5 DAYS. O 5 OR O 05 INCH. OR O 5 PERCENT AS APPLICABLE

EYR IS EQUIVALENT YEARS OF RECORD AT E. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS >

MORONDAVA, MADAGASCAR

PREPARED BY: NOCO ASHEVILLE

STATION NAME: MANANUARY, MADAGASCAR LOCATION: 21 12S 48 22E

ELEVATION: 20 FEET

WYD # 67143

	I	EKPE	RATU	RE (1	1	-	PRECI	PLTATI	164 t	NOHE	SI.		RELATIVE		Ş	URFAC		MEAN	0.010		y.	an nomber	? OF ()AYS	MITH	
		MEAN	\$	EXI	REME		·			S	CAF	II.	PYAIDITA		WI	O (K)	[S]	ICK	IAS1	FR	ECIP	ITATION	2	196 196	TEMPER	ATLAE
	MAXIMUM	HUMINIM	EAVS EXTREME WAYER OF THE PROPERTY OF THE PROP		RINIMUM	HEAN	HAXINUM	HURNAM	24-MR MAXINUM	HEAN	HAXEMUR	24-HR HAXINUM	HEAN	THES HED	OFRECTION	033dr	MAX JUST	0700 151	£200 F23	\$ 0 0 4		SNOWFALL	THUNDER	VI SISILITY NED BY FOG	?	ž
JAN	96			1 1	67		1	3 1	15 1				81	73				6	5	17	-	٥	9		3.1	1
FEB HAR	86			1	66 66		ŧ.	1	9 3				61 63	73				6		7 4		n o	1)	17	1
ADR	83	Ĭ.,			63			2	, ,				82	71					6	15		0		- 1	1	9
HAY	80	65	72	69	52	, ,	17 2	2.8	, ,				81	65				۱ ,	4	35		٥	3	- 1	o o	9
304	76	6,9	69	83	46	9	23.3	20	7 8				A0	64				5	4	75		0	1	Í	ų i	1 4
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100	A C	1		1 1	6,8		1	0.2	4 9				7H	+ 6				5	4	×		1	1	Ì	")	9
904	84			1 1	6.		{	. ^ 1	6 3				79	71				5	* *	,,		0			3	1 9
ANN	61	66		1		!	30 4	1	17 0				14 60	71 68				,	8	¥6.4		° .	3,1		,]	
EVA	10			! i	.9			1	1				20	10				,,	,	30		10	10		19	13

[#] LESS THAN 0 5 DATS, 0 5 OR 0 05 INCH. OR 1 5 PERCENT AT APPLICABLE

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEDED ONLY O OS X OF THE TIME HHENL LABELED 99 95X DIMERHISE IT IS THE MEAN

THE VALUE CISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED DRUY O OF A US THE TIME WHENLY

LABELED 99 95% OTHERNESS IT IS THE HEAN

EYR IS EQUIVALENT YEARS OF RECORD IT E. THE ALTUAL MINNER OF JEARS UTTLEZED IN THE LACULATIONS +

STATION NAVE: FARAFANGANA, NADAGASCAR LOCATION: 22 48S 47 50E

ELEVATION: 20 FEET

RNO #: 67157

	_	EKPE	_	-		P		ITATIO	ON.	1	TIVE	GEH POINT(F)		SURFA NOS 1			MEAN AHO	Į NŲ		KEAN NU	Y8ER	OF DA				
		YEAN	2	£XI	REKE		UN	CHESI		HAA	DITY		063	121	133	12)	10KI	ASI	P	RECIPITATION	ي ا	g	IL	MPERI	HURE	
,	MAXINUM	หุมใหม่ท	AVERAGE	HAXINUM	HINIHUH .	#CAN	HAXINUM	HINTHUR	24-HR MAXINUN	0100 151	1200 LST		DIRECTION	03308	01RECT 10N	SPEED	0300 181	1200 CS1	>: 0 004	SNOWFALL	THUNDERSTORM	VISIBILITY REDUCED BY FO				
JAN	84	73	78	97	65	12 1	56 5	4 7	8 6	93	80		ε	4	ε	10	5	1	19	18		٥		П		
FEB	84	73	70	97	65	10 5	26 (4 0	6 3	92	79		ε	5	ε	9	6	5	18	16		٥				
MAR	83	72	77	95	60	15 4	36 (4 7	8 9	95	78	,	SE	4	ESE	9	6	5	23	16		٥				- 1
AFR	81	69	75	89	57	9 7	20 1	1 6	6 2	93	78		sŧ	4	ESE	9	5	4	18	15		٥				ļ
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305	"	60	67	83	46	6.8	16 2	5 0	3.8	94	76		H	3	NE	9	5	4	18	14 ·		٥		li	- 1	1
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SEP	76	63	70	85	50	3 7	7 3	0.5	5.5	94	79		NE	3	٩E	10	4	3	7.4	4		0				-
001	78	66	72		49	3 3	90	٥١	4 4	92	"		NE	4	NE	10	5	3	13	1		•			- 1	
NOV	80		75		56		21 3	0 1	13 3	91	78		NE	3	NE	¥1	5	4	15	10		٥				
DEC	82	72	77	- 1	63	1	, , ,	2 3	5.5	93	79		NE	3	NE	10	5	4	18	14		'				- 1
ANN	79	67	23	97	*3	97 0	137 6		1	93	78		NE	3	NE	9	5	4	204	164				}	- [- 1
EYR	27	27	27	27	27	27	28	28	28	15	7.5		20	20	20	50	25	25	27	25		20			1	1

[#] LESS THAN O 5 DAYS, O 5 OR O 05 INCH. OR O 5 PERCENT AS APPLICABLE

FARAFANGANA, MADAGASCA

PREPARED BY: NOOD ASHEVILLE

STATION NAME: YOROMBE, MADAGASCAR LOCATION: 21 45S 43 22E

ELEVATION:

16 FEET

WO #: 67131

	I	(MPE	RATU	RE (F)	PRECIPITATION LINCHEST								RELATIVE				SU	SURFACE		TAS:	*******	MEAN NUMBE	R OF	DAYS			
	1	YEAN	S	EXIREME			···	·	,	SNOWFALL			HUMIDITY		38085	1,11	ALTI* JOE	MIN) (k)	(S)	Paf rox	FR	ECIPITATION	1		TEM	ERATU	P.E.
	HAXINGH			HAXIMUR	MOMINIM	HEAN	нахінон	HINKHOM	24-HR MAXINUM	HEAN	MAKIMUM	SE-MR MAXIFUM	0700 151	1200 651	AAPOS FRE	150	# 1333 # 1333	OTRECTION	\$3365	MAK GUST	MEAN CROUD AMOU	, 6 504	SNOWF ALL	THUNDERSTORMS	VISIBILITY			
JAN	- 1			1 1		5 9	20 2	0 4	8 6				#6	67								,		2				\prod
FEB .	90	73	82 81	1 1	5 d		1	00	6 7				90	65									1	1 16			-	
APR	86	6.7		1	53	1	, ,	0.0	1 2				91	57								,	1			1		1 1
HAY	8*	60		i i	46	0 4	1 3	Λo	4 3				90	*2								3	ļ			1 1	1	1 :
	82	58 56		1 1	42		1 7	0 0	1 2		1		91	50													1	1 1
AUG	#3	. 6		1	42	i	0	0 0	,				84 86	49								,					ł	1 1
str	34	61	73	99	50	0.2	2 7	0.0	١.				44	55							}	,	ļ			, ,		
QC 7	A6	64	75	! 1	49		1 4	0 1	1 6		•		62	64								,				1	Į	•
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DEC	89	21	11	f	59 40	٠.	33 3		4 4				87	*5								34					1	
E)#	2,	21	27	1	2,				ر د				6	,								27		10	ī			

LESS THAN 0 % DAYS. 0 % OR 0 05 INCH, OR 0 % VERCENT AS AFFLICABLE

THE VALUE LISTED UNDER PRESSURE ALTRIUDE ENDECATES THAT VALUE ES EXCEPDED ONLY \$ 05 % OF THE TRIC WHEN

LABELED 99 95% OTHERWISE IT IS THE HEAR.

EVR IS EQUIVALENT YEARS OF RECORD IN E. THE AUTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS >

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCECDED ONLY O OS % OF THE 12ME HYEN

LABELED 99 95% OTHERWISE IT IS THE HEAN

EYR IS EQUIVALENT YEARS OF RECORD IT E. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CALULATIONS I

STATION NAME: TULEAR, MADAGASCAR LOCATION: 23 235 43 44E

ELEVATION: 30 FEET

RNO 1: 67161

	ī	EMPE	RATU	RE (î)	PRECIPITATION (INCHES)								IVE		S	URFAC	[MEAN	ago		Y.	EAN NUMBER	} GF							
		TEAN	S	EXI	REKE		,			SNOWFALL			HAMIDITY		17.)	WIN	Ð (K)	SI	10X	UNI TASI	PR	ECIP	ITATION	¥\$	AEDUCEO	IE	KPERA	ATURE			
	HAXINUH	MINIMUM	AVERAGE	44-		MAXINUM		HEAN	HAXIHUR	HINIHUH 24-HR HAXIHUH		NEAN	MAXIHUH	24-HR MAXIMUN	0700 151	1200 151	OEM POINT	DIRECTION	SPEEG	HAX GUST	0300 151	1700 LS1	>= 0 004		SNOWFALL	THUNDERSTOR	VISIBILITY RED BY FOG				
JAN	90		- 1	- 1	61	3 3		1 3	7 4				82	69		SH	8		3	4	8		v	11				\top	٦		
FEB MAR	91		- 1	- 1	61	3 2			8 9				95	67		SH	,		3	4	7		0	16					1		
APR	89 87	71 67	27	102	58 53	0 4	14.2	1 1					84		71 70	SH	8		2	2	5		٥	1					- 1		
HAT	84	1		97	48		5 5						86	57		SSH	,		2	2	3		ů	3				- 1	- {		
JUN	81	58	69	89	45	0.5	4 1	00	1.5				87	55	62	\$\$H	,		,	2	3		٥	q					- [
JUL	80	57	68	90	43	0 2	2 8	0.0	0 9				85	55	62	SSW	,		1	,	2		٥	٥				ı	- 1		
AUG	62	58	70	92	44	0 1	2 0	00	1.1				79	52	61	SSM	8		,	2	1		٥	٩							
SEP	84			100	47	0 3		1 * 1					79	58		SSW	8		,	1	1		٥	1					- }		
NOV	*5	1	,	102	50			1 1	26				77	64		\$SH SH	8		2	2	5		۰	0				- 1	- 1		
DEC	87 86		- 1	104	59 59	3.0	1 1	00	- 1	1			78		71 74	SH SH	8		3		3		0	24				1	1		
ANN	86	65		105	43	15 0		5 1	8 9				81		68	SH.	8		2	3	43		ŏ	63					-		
EYR	27	27	27	27	27	30	30	30	21				6	6	10	11	13		16	16	27		27	15				-			

[#] LESS THAN O 5 DAYS, O 5 OR O 05 INCH. OR O 5 PERCENT AS APPLICABLE

THE VALUE LISTED UNDER PRESSURE ACTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY O OF X OF THE TIME WHENL

LABELED 99 95% OTHERWISE IT IS THE HEAN

EYR IS EQUIVALENT YEARS OF RECORD AT E THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS >

TULEAR, MADAGASCAR

PREPARED BY: NOCO ASHEVILLE

STATION NAME: FORT DAUPHIN, MADAGASCAR LOCATION: 25 02S 46 57E

ELEVATION: 26 FEET

NMO 3: 67197

	Į	EMPI	ERA	IUR	£ 11	i)	,	PRECI	PLIAT	ION 1	NÇH	:\$1		RELAT	IVE				SURFACE		ICK FAS 1		ME	an number	OF	DAYS	WITH					
		MEA	VS		EXI	EME		y-2-74	·	,	SN	nFAI	L	HEMIDITY		SSURE	(JII)	153	XIN	(K)	Sì	5	PPE	CIP)	ITATION	H.S	106	TEM	PERAT	URE		
	MAXIMUM	HIMINUM		AVERAGE			MAXINGM		N43H	HAXIMUM	HINIHUM	24-HR MAXINUM	46.4%	MAXIPUM	24-HR MAXINUM	0700 KST	1200 LST	TAPER PRE	100	PRESSURE AL FEET KHE	9146¢1104	SPEED	MAK GUST	HEAN CLOUD ANDU	>- 0 004		SNOWFALL	SHOUSERSTORMS	VISTBILLTY REDUCED BY FU	06 **	- 1	<- 32
JAN	0.5	,	1	,4	94	64	, ,	22	1 ,	9 6				84	70		72		ΝĒ	11		3	16		٥	17	1	8		9		
169	95	,	ą	29	96	65	6 5	1	2 2	4 1				84	68		71		ENE	1 1		1	14	1	0	10	•	1		g		
MAR	63		1	"	,	60		1	0.6	31 3				89	31		73		ENE	1		3	16		٥	9	} "	6		9		
APR	91	6	1	75	91	55		•	0.6	4.4				84	74		68		NE				13	1	0	5	0]		7		
MAY	76		1	"	88	52			0					89	6.9		65		76				13	Ì	ů] ;) ,]	ł	7 1		
JUL	76		3	68	85	49		ı	0.6	1				87	69		6,		NC	1 1			13	1	0	,						
AUG	75	•	ť		84	46	ĺ	("	(6 3				85	66		6,		i 1				12	- 1				d	1	d		
SEP	7,		1	70	97	52		(-	1 .	.,				83	66		62	[NE.	,	1		10	Š	0	,				9		
001	60	()	(,	64	54		(3 4	•			80	67		64		NE	14		3		Ì	٥	5	٥	d		d		
NOV		a .		,5	9,	59	ı		0 3	٠, ١				93	70	}	6.7	Ì	NE	12		1	13	ì	٥	} e	0	4	1	9		
086	64	,	,	27	95	61	4 6	12	2 2	4 5				62	70		69		ENE	11		5	14	i	٥	10	,	1	I	d		
ANN	*0	,	4	,,	96	46	62 9	01	30 9	٠, ،				85	69		66		*(11		4	160	-	0	70	3	38	- 1	q		
(YR	27	3	7	27	2	27	30	3	30	21				6	٠		20		9	•		10	27		\$0	30	25	20	丄	20		

[#] EESS THAN O 5 DAYS, O 5 OR O 05 INCH, OR 0 5 PERLENT AS APPLICABLE

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCECDED UNLY 0 05 % OF THE TIME HIGH

LABELED 49 95% OTHERHISE IT IS THE HEAR

EYR IS EQUIVALENT YEARS OF RECORD IT C. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS

STATION NAVE - FAUX CAP, MADAGASCAR LOCATION: 25 33S 45 32E

ELEVATION: 210 FEET

KM #: 67194

	I	[KPE	RATU	RE (I	1	PRECIPITATION (INCIES)								IVE				SURFACE		1 TENTHS !		KE	an nwber	GF	DAYS	HITH	l			
		KEAN	<u>s</u>	EXI	REME					SVOWFALL			KMIOITY		SSURE	312		MIN) (K1	SI		PRE	CIP	TATICY	Ş		ΙĐ	PERI	ATURE	
	HAXIHUH	HINIHUM	AVERAGE			HEAN	HAXIMUM	MININUM	24-HR HAXINUM	нели	HAXIBUH	24-HR HAXINUN	0000 151	1500 151	VAPOR PRE	104	PRESSURE AL FEET HE	OIRCCION	03348	2 2	HEAN CLOUD ANOUNT	>< 0.004		SYOWFALL	THUNDERSTORMS	VISIBILITY				
JAN	89	73	81	105	58	2 7			6 2				82	25								9	٦							\neg
FE8	90			106	1				4 0	i i			82	73								8								- [
MAR	87			104		2 4			4 0	l			83	//3								0	ı						. 1	
APR	95	1	1			10			2 0	1			83	73								- 1	- 1			•				
JUN	81 76			•					1 5				82 82	72 68							1	- []	-							- 1
JUL	78								2 6				80	69								ا				}			1	-
AUG	79	1 1		97					3 6	1			82	71	l								ĺ							
SEP	83	61	72	102	47	0.5			0 9				80	71								3	Ì							
007	86	65	76	104	47	0.6			10				79	72							j	4								
NOV	87	68	78	106	54	1 3			3 2				78	72								5				1				
OEC	89	71	80	105	59	3 7			4 4	ì			79	73			1					9	1							- 1
ANN	84	1	1	1	- 1				6.2	1			81	72								75				ĺ				
EYR	27	27	27	27	27	27			21				6	6								27				1				

LESS THAN 0 5 DAYS, 0 5 OR 0 05 INCH, OR 0 5 PERCENT AS APPLICABLE

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED GYLY 0 05 % OF THE TIPE WHEN LABELED 99 95% OTHERWISE IT IS THE MEAN

EYR IS EQUIVALENT YEARS OF RECORD (I E THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS >

FAUX CAP, MADAGASCAR